

**IN THE UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION**

GEORGIA-PACIFIC CONSUMER)
PRODUCTS LP,)
FORT JAMES CORPORATION, and)
GEORGIA-PACIFIC LLC,)

Plaintiffs,

V.

No: 1:11-cv-00483

Judge Robert J. Jonker

INTERNATIONAL PAPER CO.,)
and WEYERHAEUSER CO.,)

Defendants.

**DEFENDANT NCR CORPORATION'S PRELIMINARY
PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW FOR PHASE II**

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Citation Conventions

ACPC:	Appleton Coated Paper Company
AOC:	Administrative Order by Consent or Administrative Order on Consent
ASAO:	Administrative Settlement Agreement and Order on Consent
BBL:	Blasland, Bouck & Lee
CCP:	Carbonless Copy Paper manufactured using PCBs
CPM:	Combined Paper Mills
CERCLA:	Comprehensive Environmental Response, Compensation, and Liability Act
EPA:	United States Environmental Protection Agency
GP:	Georgia-Pacific Consumer Products LP, Fort James Corporation, and Georgia-Pacific LLC
IP:	International Paper Company
KRIC:	Kalamazoo River Improvement Company
KRSG:	Kalamazoo River Study Group
MDAG:	Michigan Department of Attorney General
MDEQ:	Michigan Department of Environmental Quality, formerly Michigan Department of Natural Resources
MDNR:	Michigan Department of Natural Resources
MWRC:	Michigan Waste Resources Commission
NCASI:	National Council for Stream Improvement
NCP:	National Contingency Plan
NCR:	NCR Corporation
NCR Affiliates:	ACPC, CPM, Systemedia
NCR Phase I PFOF:	Defendant NCR Corporation's Proposed Findings of Fact and Conclusions of Law, dated Apr. 18, 2013 (Dkt. No. 422-1)
NPL:	National Priorities List
OU:	Operable Unit
PCB:	Polychlorinated Biphenyl
Production Period:	1954 – April 1971
PRP:	Potentially Responsible Party
RI:	Remedial Investigation
RI/FFS:	Remedial Investigation/Focused Feasibility Study
RI/FS:	Remedial Investigation/Feasibility Study
ROD:	Record of Decision
TCRA:	Time-Critical Removal Action

Pursuant to the Case Management Order dated November 21, 2013 (Dkt. No. 437), as amended by the Court's Order dated August 13, 2014 (Dkt. No. 542), Defendant NCR Corporation ("NCR") respectfully submits the following Preliminary Proposed Findings of Fact and Conclusions of Law.

Preliminary Statement

This case concerns the apportionment and allocation of environmental cleanup costs at the Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site (the "Site")—an approximately 80-mile stretch of the Kalamazoo River (from the Morrow Dam downstream to Lake Michigan), adjacent river banks and floodplains, a 3-mile stretch of Portage Creek in Kalamazoo County, and a number of disposal areas and paper mill properties contaminated with PCBs released by, among other things, recycling or de-inking of PCB-containing carbonless copy paper ("CCP"). (Am. Compl. (Dkt. No. 80) ¶ 21; TX 2175 at 17-18.)

Plaintiffs Georgia-Pacific Consumer Products LP, Fort James Corporation and Georgia-Pacific LLC (collectively, "GP") seek to hold NCR responsible, at least in part, for cleanup costs at the Site, despite the undisputed fact that GP owned or operated mills at the Site that deliberately discharged wastewater into the Kalamazoo River, and NCR never did. Defendants / Counterclaim-Plaintiffs International Paper Company ("IP") and Weyerhaeuser Company ("Weyerhaeuser") (together with GP, the "Mill Parties") have asserted cross-claims against NCR seeking similar relief, though they too owned or operated, or succeeded in ownership, to mills at the Site that deliberately discharged wastewater into the Kalamazoo River.

Although NCR contends that it can and should have no liability for the cleanup of the Site, the Court held in its Phase I Order, dated September 26, 2013, that NCR is liable as an arranger for the cleanup of at least some of the PCBs discharged at the Site.¹ As explained herein, however, NCR believes, (i) its responsibility for cleanup at the Site can be apportioned as no more than 2% and less when standard equitable analyses are applied; (ii) no greater share can and should be assigned to NCR under principles of equitable allocation; and (iii) GP's claimed costs are subject to a number of defenses and offsets.

First, there is a reasonable basis for apportionment at the Site, and NCR should be assigned no more than 2% of Site response costs because it is only potentially responsible for a fraction of the PCBs at the Site that arise from recycled CCP. In particular:

- (1) NCR can be held responsible for no more than 75% of all PCBs in the Kalamazoo River that are made up of Aroclor 1242, the only PCB ever used in CCP; so NCR cannot be said to have arranged for the disposal of the PCBs not included in CCP;

¹ Although NCR respectfully disagrees with the Court's Phase I liability ruling and its partial denial of NCR's and IP's motion for summary judgment based on the applicable statute of limitations, NCR recognizes that it is bound by those rulings but seeks to preserve its position for appeal.

- (2) no more than 4.2% of all CCP recycled by paper mills located nationwide was made up of CCP broke or trim generated by facilities owned by NCR while NCR owned them, such that NCR could be said to have arranged for the disposal of CCP through their actions;
- (3) the vast majority of the recycled CCP broke and trim generated by NCR's affiliates was recycled by paper mills outside of the Kalamazoo area and mostly by mills located along the Fox River in Wisconsin. The alleged evidence cited by the Mill Parties to show that CCP broke and trim generated by NCR's affiliates was recycled at the Site corresponds to no more than a few truckloads of CCP broke and trim—a tiny amount in comparison to the amount of CCP recycled at the Site that came from sources controlled by NCR;
- (4) NCR can only be responsible for PCB contamination caused at the Site while NCR had the intent necessary to be liable as an arranger, which the Court found in Phase I began in March 1969. By multiple measures, no more than a small percentage of contamination at the Site was caused by PCBs released after 1969.

Second, NCR's allocable share of equitable responsibility at the Site is no greater than 2% because:

- (1) NCR can be held responsible for no more than 75% of all PCBs in the Kalamazoo River that arise from Aroclor 1242, the only PCB ever used in CCP; NCR cannot be said to have arranged for the disposal of PCBs not included in CCP;
- (2) the Kalamazoo-area mills, none of which was owned or operated by NCR, discharged most of the PCBs present at the Site today;
- (3) unlike the Mills Parties, NCR owned no facilities and never discharged any PCBs or other pollutants at the Site;
- (4) no more than a small amount (2.24%) of CCP recycled at the Site could have been made up of CCP broke or trim generated by facilities owned by NCR (while owned by NCR) that the Mill Parties allege sent CCP to the Site;
- (5) NCR's arranger liability is limited to the period after March 1969, and, for that reason, NCR can only be equitably responsible for contamination arising from the percent of CCP recycled nationwide that was made up of broke or trim generated by NCR's affiliates after 1968, or from the two truckloads of CCP that the Mill Parties allege were sent from one of NCR's affiliates to the Site after January 1, 1969;
- (6) NCR manufactured CCP using PCBs, but did not act with culpable intent; and

- (7) even if the Kalamazoo-area mills had appreciated during the Production Period that Aroclor 1242 in CCP presented a risk to the environment, they would have, nonetheless, polluted the River with their paper mill waste, and continued doing so even after being told they were releasing PCBs into the environment.

Third, GP's claim and, in particular, its claim for past costs is subject to a number of defenses and offsets:

- (1) GP's entire claim is time-barred because GP failed to bring suit within three years of being held liable in a 2000 court judgment for the "entire cost of response activities relating" to the Site;
- (2) in the alternative, approximately \$80.85 million of GP's claimed costs are time-barred (\$49 million of which the Court has already excluded as time-barred and \$6 million of which GP expressly conceded is time-barred) because they arise under liability-resolving settlements that GP signed with the government and that became effective more than three years before GP filed its complaint in this action;
- (3) approximately \$20.3 million of GP's claimed costs not yet excluded as time-barred are unrecoverable as unrelated to PCB response costs, as non-compliant with the National Contingency Plan ("NCP") or because GP has inaccurately accounted for or not provided adequate documentation for those costs;
- (4) any costs GP may recover must be offset by the \$70.82 million in insurance proceeds that GP received pursuant to policy settlements that covered liabilities related to the Site but did not expressly allocate proceeds to other liabilities; and
- (5) any recoverable costs must also be offset by at least \$1.74 million in proceeds that GP received from past settlements and judgments against other parties related to cleanup at the Site.

In sum, none of the claims or cross-claims asserted against NCR has merit: NCR can be held responsible for no more than a small share of the clean-up costs at the Site.

Proposed Findings of Fact²

I. Introduction

A. The Parties

(1) NCR Corporation

1. NCR is a Maryland corporation with its principal place of business located in Duluth, Georgia. (TX 12037.)

2. NCR provides self-service and assisted-service solutions, including automated teller machines (ATMs) and ATM and financial services software, point of sale devices and software, and self-service kiosks and software applications that permit consumers to interact with businesses from their computers or mobile devices in the financial services, retail, hospitality, travel and telecommunications and technology industries. (TX 12037 at 1.)

3. NCR has never owned or operated any facility that discharged polychlorinated biphenyls (“PCBs”) into the Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site (the “Site”). (Final Pretrial Order, dated Jan. 1, 2013 (Dkt. No. 360) (“Phase I PTO”) at 3, ¶ 1.)

(2) Georgia-Pacific

4. Plaintiffs Georgia-Pacific Consumer Products LP and Fort James Corporation are subsidiaries of Plaintiff Georgia-Pacific LLC, an entity with its principal place of business in Atlanta, Georgia. (TX 12363.) Georgia-Pacific LLC is a wholly-owned subsidiary of Koch Industries, Inc., a private entity with its principal place of business in Wichita, Kansas. (*Id.*)

5. GP is one of the world’s leading makers of tissue, pulp, paper, packaging, building products and related chemicals. (TX 12363.)

6. GP is the successor to companies that owned and operated paper mills that discharged PCBs into the Site. (Phase I PTO, at 3, ¶ 2.)

6.1 GP acquired the Kalamazoo Paper Company in July 1967. (TX 12358 at 77.)

6.2 GP is a successor to companies that owned and operated the Sutherland Mill and the Kalamazoo Vegetable Parchment Mill. (TX 12358 at -78-79.)

6.3 GP purchased the Hawthorne Mill in 1978. (TX 11107 at -367.)

² These proposed findings of fact and conclusions of law are based on what NCR expects the evidence to show at the upcoming trial. They remain subject to change upon completion of trial. The citations herein are predictive and illustrative only and will be revised and supplemented when all the evidence is in.

(3) International Paper Company

7. IP is a New York corporation with its principal place of business in Memphis, Tennessee. (TX 12038.)

8. IP is a global paper and packaging company with primary markets and manufacturing operations in North America, Europe, Latin America, Russia, Asia, Africa and the Middle East. (TX 12038 at 1.)

9. IP is the successor by merger to the St. Regis Paper Company (“St. Regis”). (Phase I PTO at 9, ¶ 2.)

9.1 St. Regis owned the Bryant Mill from 1946 until 1966, (Phase I PTO at 9, ¶ 3; Phase I Decision at 5), but operated the Bryant Mill only until June 30, 1956. (Phase I PTO at 9, ¶ 8; Opinion and Order, dated Sept. 26, 2013, (Dkt. No. 432) (“Phase I Opinion”) at 5.)

9.2 St. Regis was the previous owner of the mills located on Fountain Street and Angell Street. (TX 11787 at -231.)

10. IP is a successor to the MacSimBar Mill. Hoerner-Waldorf Corporation (“Hoerner-Waldorf”) assumed control of MacSimBar in 1966-1968. Hoerner-Waldorf merged with Champion International Corporation, which in 1976 was merged into IP. (TX 11122 at -307; IP Supp. Resp. to GP’s First Phase II RFAs, dated July 25, 2014 (TX 12413 at 2.)

(4) Weyerhaeuser Company

11. Weyerhaeuser is a Washington corporation with its principal place of business in Washington State. (TX 12039.)

12. Weyerhaeuser is one of the largest manufacturers of wood and specialty cellulose fibers products and one of the world’s largest private owners of timberlands. (TX 12039 at 1.)

13. Weyerhaeuser is an owner or operator of one or more facilities at the Site within the meaning of ¶ 101(20)(A) of CERCLA. (Stip. and Order, dated Feb. 8, 2013 (Dkt. No. 369) ¶ 1.)

13.1 Weyerhaeuser owned the Plainwell Mill from 1964 until 1970. (TX 4251 at -741.)

B. Carbonless Copy Paper

14. In the 1950s, NCR developed and commercialized a paper system called NCR Paper brand carbonless copy paper, a product designed to transfer images between coated sheets of paper. (Phase I PTO at 3, ¶ 3.)

14.1 CCP has been referred to as one of the outstanding paper-related innovations of the latter half of the twentieth century. (TX 11618 at -143.)

14.2 CCP consisted in its simplest form of two overlain sheets, each with a coating. (Phase I PTO at 3.) The top sheet of CCP, called “Coated Back” or “CB”, was coated on its backside with a thin layer of emulsion containing microscopic capsules. (*Id.*) The capsules contained colorless ink, oils and a transfer solvent. (*Id.*) The bottom sheet of CCP, called “Coated Front” or “CF”, was coated on its front side with a coating that contained no emulsion. (*Id.*) Business forms with three or more pages had a middle sheet, called “Coated Front/Back” or “CFB”. (*Id.*) The front side of this sheet was coated with the CF coating and the backside was coated with the CB emulsion. (*Id.*)

14.3 NCR received a series of patents for CCP in the 1950s. (*See* TX 2449; TX 3588; TX 12205; TX 12206; TX 12207; TX 12208; TX 12209; TX 4717.)

(1) CCP Manufacturing

15. The production of multi-part CCP business forms was a two-stage process. First, base paper was coated with CCP emulsion, and then the coated paper was converted into business forms.

16. From 1954-April 1971 (the “Production Period”), CCP was manufactured using an emulsion (“CCP Emulsion”) containing Aroclor 1242, a PCB purchased from Monsanto Company (“Monsanto”). (TX 3112 at -525.)

17. In total, NCR purchased 45.2 million pounds of Aroclor 1242 from Monsanto. (TX 3113 at -525.) NCR used the Aroclor 1242 that it purchased from Monsanto to create 99.9 million pounds of emulsion for use in CCP. (TX 1174.)

18. NCR sold the CCP emulsion that it created to four different entities: Appleton Coated Paper Company (“ACPC”), Combined Paper Mills (“CPM”), Mead Corporation (“Mead”), and Nekoosa Papers, Inc. (“Nekoosa”) (collectively, the “Coating Companies”). (Phase I PTO at 4-6; (TX 4920 at -499); Schumaker 11/02/2011 Dep. Tr. at 68:19-69:1 (TX 11); Hietpas, Phase I Tr. 968:10-12; Montgomery 03/26/2012 Dep. Tr. at 16:2-5 (TX 52); Fetters 03/27/2012 Dep. Tr. at 18:24-19:2, 19:10-13 (TX 53).)

18.1 ACPC operated in Appleton, Wisconsin and coated CCP with CCP emulsion from 1953-1971. (Phase I PTO at 5 ¶ 22.) ACPC operated independently from NCR until NCR acquired it on September 30, 1970. (TX 12285.)

18.2 CPM coated CCP with CCP emulsion from December 1969 to approximately April 1971 in Combined Locks, Wisconsin. (Phase I PTO at 5, ¶¶ 33, 36; Frazier R. (12/5/2014) ¶ 92 (TX 4641).) CPM operated independently from NCR until NCR acquired it on July 28, 1969. (TX 12284.)

18.3 Mead coated CCP with CCP emulsion at its Chillicothe, Ohio facility from 1955 to 1971. (Phase I PTO at 6, ¶ 46.) NCR and Mead have always been independent companies. (Phase I PTO at 6, ¶ 52.) NCR is not a corporate successor to Mead. (Phase I PTO at 6, ¶ 51.)

18.4 Nekoosa coated CCP with CCP emulsion from November 1970 through March 1971 in Nekoosa, Wisconsin. (TX 4920 at -499.) GP owned the Nekoosa mill for some time prior to August 2001. (*Id.* at -498.) NCR has never owned or operated any Nekoosa mill.

19. The Coating Companies used the CCP emulsion that they purchased from NCR to coat paper and to create rolls or sheets of CCP. (Phase I PTO at 4-7; TX 4920 at -499.)

20. NCR purchased coated rolls and sheets of CCP from the Coating Companies and either sold rolls and sheets to independent converting companies (“Independent Converters”) or transferred or sold them to Systemedia, a division of NCR that, among other things, converted CCP and non-CCP forms (together, “Converting Companies”). (Phase I PTO at 4-6; TX 4920 at -499-500; TX 3560 at -717; Frazier R. (12/5/2014) at 15 (TX 4641).)

20.1 During the Production Period, Independent Converters purchased over 90% of the coated CCP rolls and sheets sold by NCR, and NCR’s Systemedia Division processed the remaining 10% or less. (TX 1158 at -489; McIntosh 3/15/2012 Dep. Tr. at 30:4-17 (TX 49); Wittenbrink R. (1/5/2014) ¶ 19 (TX 2482).)

20.2 Other than its Systemedia Division, NCR owned no entities that converted CCP. (Frazier R. (12/05/2014) at 29 (TX 4641).)

21. The Converting Companies processed rolls and sheets of CCP into finished CCP products, such as business forms. (Phase I PTO at 7, ¶ 62.)

22. In total, approximately 1.337 billion pounds of CCP was manufactured using Aroclor 1242 during the Production Period. (TX 3112 at -525; Wittenbrink R. (12/5/2014) ¶ 15 (TX 2482).)

23. During the Production Period, the Coating Companies generated the following estimated amounts of coated CCP rolls and sheets:

	Mead	ACPC	CPM	Nekoosa	Total
Total CCP Production (lbs)	462.30 million	855 million	17.26 million	3.30 million	1,337 billion

(Wittenbrink R. (2/27/2015) at App. B, Ex. A (TX 2484); Frazier R. (12/5/2014) at 21 (TX 4641); Woodard R. (12/5/2014) at Figure 3.2.)

(2) Recycling of CCP

24. Recovered paper is a significant source of fiber in the paper industry. (Scott R. (12/5/2014) at 6 (TX 2506).) Recovered fiber is often used because it is less expensive than virgin fiber and the material is often readily available. (*Id.*; Farrand R. (12/5/2015) at 1 (TX 4518); Frazier R. (12/5/2015) at 26-27 (TX 4641).)

25. During and after the Production Period, the following three forms of CCP were recycled: (i) CCP broke, (ii) CCP trim, (iii) CCP after consumer use (“post-consumer CCP”). (Wittenbrink R. (12/5/2014) ¶ 25 (TX 2482); Frazier R. (12/5/2014) at 16-21 (TX 4641).)

26. In manufacturing CCP rolls and sheets, the Coating Companies generated “broke”, paper that did not meet product specifications or that was damaged in the manufacturing process. (Phase I PTO at 4, ¶ 12.) The Coating Companies each generated the following estimated amounts of broke:

	Mead	ACPC	CPM	Nekoosa	Total
Total Broke Generated (lbs)	46.23 million	59.85 million	1.21 million	0.23 million	107.52 million
% of Total Broke	43%	56%	1%	<1%	100%

(Wittenbrink R. (2/27/2015) App. B, Ex. B (TX 2484); Frazier R. (12/5/2014) at 18 (TX 4641).)

27. In the process of converting CCP rolls and sheets into finished CCP products, the Converting Companies generated CCP trim—paper trim and cuttings produced during the converting process. (Phase I PTO at 4, ¶ 12.) The Converting Companies each generated the following estimated amounts of trim:

	Systemedia	Independents	Total
CCP Trim Generated (lbs)	18.46 million	221.46 million	239.92 million
% Trim Generated	8%	92%	100%

(Wittenbrink R. (2/27/2015) App. B, Ex. C (TX 2484).)

28. 98% of CCP trim and broke generated during the Production Period was recycled. (Wittenbrink R. (12/5/2014) ¶ 26 (TX 2482).)

29. An estimated 20% (198.05 million lbs.) of CCP consumer products were recycled after consumer use. (Wittenbrink R. (2/27/2015) at App. B, Ex. D (TX 2484); Scott R. (1/30/2015) Ex. 21 (TX 2507); TX 5774 at -818.)

30. Both the Coating Companies and Systemedia facilities sold CCP broke and trim to scrap-paper brokers, who, in turn, resold it. (Phase I PTO at 5-7; TX 3283 at 3-4; Dolan, Phase I Tr. at 738:23-739:9; TX 52 at 30:3-18 (Coating Companies); TX 47 at 85:18-86:5; TX 48 at 47:7-10 (Systemedia).)

31. NCR had no involvement in the sale of CCP broke or trim from Mead (Phase I PTO at 6, ¶¶ 54-59), Nekoosa, Independent Converters, or the sale of post-consumer CCP.

32. Each channel of CCP generated the following estimated amounts of recycled CCP (See Addendum A for annual data):

Post-Consumer (lbs)	Independents (lbs)	Mead (lbs)	Systemedia (lbs)	ACPC (lbs)	CPM (lbs)	Nekoosa (lbs)	Total (lbs)
198.05 mill.	217.03 mill.	45.31 mill.	18.09 mill.	58.65 mill.	1.18 mill.	.23 mill.	538.53 mill.
37%	40%	8%	3%	11%	<1%	<1%	100%

(Wittenbrink R. (2/27/2015) at App. B, Ex. D (TX 2484).)

C. Recycling Mills and the Publicly Owned Treatment Works

33. Twelve paper mills operated within the bounds of the Site, and two operated upstream from the Site, during some of the time that CCP was recycled: (i) the Kalamazoo Paper Company Mill, (ii) the Hawthorne Mill, (iii) the National Gypsum Mill; (iv) the Rex Mill; (v) the King Mill; (vi) the Monarch Mill; (vii) the Bryant Mill; (viii) the Sutherland Mill (including Plant 11); (ix) the Kalamazoo Vegetable Parchment Mill; (x) the Hamilton Mill; (xi) the Otsego-Menasha Mill; (xii) the MacSimBar Mill, (xiii) the Angell Street Mill; and (xiv) the Fountain Street Mill (all mills collectively, the “Kalamazoo Mills” or the “Mills”).

(1) Kalamazoo Paper Company

34. The Kalamazoo Paper Company Mill (the “KPC Mill” or “KPC”) was located along the north bank of the Kalamazoo River in Kalamazoo, Michigan, and in Work Area 1B of OU5, between Morrow Dam and the confluence of Portage Creek with the Kalamazoo River. (TX 11107 at -379-80.)

35. The KPC Mill was a deinking mill that operated from 1867 to December 2000, primarily manufacturing fine printing papers. (TX 11107 at -367, -377, -388-389; Woodard R. (12/5/2014) at 29 (TX 4555).) The KPC Mill closed one of its two deinking units between 1968 and 1975. (TX 11107 at -389.)

36. The KPC Mill was owned by:

- Kalamazoo Paper Company (1899–1967)
- Georgia-Pacific Corporation (1967–December 2000)

(TX 11107 at -367); Woodard R. (12/5/2014) at 29 (TX 4555).)

37. The KPC Mill’s furnish was a mixture of wastepaper and virgin pulp. (TX 11107 at -373; Woodard R. (12/5/2014) at 38 (TX 4555).) The recycled paper furnish at the KPC Mill consisted of “book” stock, such as magazine paper, and “ledger” paper, such as business forms. (TX 11107 at -399; Scott Report (12/5/2014) ¶ 136 (TX 2506); Woodard R. (12/5/2014) at 38 (TX 4555).)

38. Effluent from the KPC Mill was discharged to the Kalamazoo River without any treatment until at least 1953. (TX 11110 at -687, -690; Ram R. (1/30/2015) at 112-113

(TX 218).) Effluent from the KPC Mill received primary treatment at one of two primary clarifiers beginning in 1954 and 1955, respectively. (TX 12287 at 26; TX 11110 at -690; Ram R. (1/30/2015) at 112-113 (TX 218).) Beginning in 1967, the KPC Mill discharged clarified effluent to the City of Kalamazoo Publicly Owned Treatment Works (“Kalamazoo POTW”). (TX 11110 at -690; TX 11785 at -216; Ram R. (1/30/2015) at 113 (TX 218); Wolfe R. (2/27/2015) at 47 (TX 4669).)

39. Solid waste from the KPC Mill’s operations was deposited at the King Highway Landfill from the 1950s until 1977, and again beginning in 1987. (TX 11107 at -470; *see* Wolfe R. (2/27/2015) at 49 (TX 4669); GP 3d Supp. Resps. to Weyerhaeuser’s 1st Phase II Interrogs. at 28-29 (TX 409).) Starting in 1967, dewatered solids were removed from the King Highway Landfill and deposited at the Willow Boulevard Landfill from 1967 to 1975, and at the A-Site Landfill from 1975 to 1977. (TX 11107 at -473; Wolfe R. (2/27/2015) at 49 (TX 4669); GP 3d Supp. Resps. to Weyerhaeuser’s 1st Phase II Interrogs. at 28-29.) From 1977 to 1987, the A-Site landfill received solid waste from the KPC Mill’s dewatering system. (TX 11107 at -473; Wolfe R. (2/27/2015) at 49 (TX 4669); GP 3d Supp. Resps. to Weyerhaeuser’s 1st Phase II Interrogs., dated Mar. 9, 2015 at 28-29 (TX 409).)

(2) Sutherland Mill and Plant 11

40. The Sutherland Mill, also known as the Kalamazoo Board Mill, is located along the west bank of the Kalamazoo River in Kalamazoo, Michigan, and in Work Area 1C of OU5, between the confluence of Portage Creek and the Kalamazoo River and the Plainwell No. 1 dam. (TX 1111 at -388-893); Woodard R. (12/5/2014) at 31-32 (TX 4555).)

41. The Sutherland Mill has operated from around 1908 and is still in operation, primarily producing food-grade paperboard. (TX 11113 at -391-92, -550 (Tables 2-1 & 2-2); GP Resps. to Weyerhaeuser’s First Interrogs., dated Feb. 28, 2014, at 25 (TX 12287); Woodard R. (12/5/2014) at 31 (TX 4555).) From May 1975 until May 1977, the Sutherland Mill operated a deinking mill that primarily supplied pulp to the KVP Mill. (TX 11113 at -392); Woodard R. (12/5/2014) at 31 (TX 4555); Werner R. (1/30/2015) Attach. C, 18 (TX 5802).)

42. The Sutherland Mill was owned by:

- Standard Paper Co. & William E. Hill Co. (1908–1932)
- Sutherland Paper Co. & American Electrical Signs (1932–1950)
- Sutherland Paper Co. (1950–1960)
- KVP Sutherland (1960–1966)
- Brown Company (1966–1976)
- Gulf & Western Corporation, through a controlling interest in Brown Company (1976–1980)
- James River Paper Company, Inc. (1980–1997)
- Fort James Corporation (1997–1999)
- ACX Technologies, which later became known as Graphic Packaging Corporation (1999–present)
- GP acquired Fort James Corporation in 2000

(TX 11113 at -390, -550 (Table 2-1); TX 12366; Woodard R. (12/5/2014) at 31 (TX 4555).)

43. The Sutherland Mill's furnish was 100% recycled paper. (TX 11113 at -395; Woodard R. (12/5/2014) at 40 (TX 4555); Ram R. (1/30/2015) at 122 (TX 218).) During its two years of its deinking operations, the Sutherland deinking mill "used mainly mixed office waste (MOW) and ledger as feedstock." (TX 11113 at -393.)

44. Effluent from the Sutherland Mill began receiving primary clarifier treatment in 1953. (TX 11113 at -423.) The Sutherland Mill discharged treated effluent to the Kalamazoo River until 1967, and to the Kalamazoo POTW after 1967. (TX 11113 at -423, -425; GP Resps. to Weyerhaeuser's First Phase II Requests, dated Feb. 28, 2014, at 27 (TX 12287); Woodard R. (12/5/2014) at 48 (TX 4555).)

45. The Sutherland Mill deposits its solid waste at a landfill formerly operated by the KVP Mill. (TX 11113 at -397; GP Resps. to Weyerhaeuser's First Phase II Reqs at 27 (TX 12287).)

46. Until 1994, the owners and operators of the Sutherland Mill, also owned and operated Plant 11. (TX 11118 at -954 (Table 2.1); *see* TX 11113 at -390, -550 (Table 2-1); Woodard R. (12/5/2014) at 31-32 (TX 4555).)

47. Plant 11 was located at 2050 East Michigan Avenue in Kalamazoo, Michigan, and in Work Area 1B of OU5, between Morrow Dam and the confluence of Portage Creek and the Kalamazoo River. (*See* TX 11118 at -893.)

47.1 Plant 11 was owned by the Sutherland Paper Company and its successors as follows:

- Sutherland Paper Company (unknown–1960)
- KVP-Sutherland (1960–1966)
- Brown Company (1966–1976)
- Gulf & Western Corporation, through a controlling interest in Brown Company (1976–1980)
- James River Corporation (1980–1994)
- L.C. Howard (1994–at least 2001)

(TX 11118 at -954 (Table 2-1).)

48. Plant 11 manufactured paperboard from before the Production Period until 1969 and converted finished products until 1991. (TX 11118 at -894; Woodard R. (12/5/2014) at 31 (TX 4555); Werner R. (1/30/2015) Attach. C at 14 (TX 5802).)

49. Plant 11 used a variety of recovered paper as furnish. (TX 11118 at -898.)

50. Effluent to Plant 11 was discharged untreated to the Kalamazoo River until 1967, when Plant 11 connected to the Kalamazoo POTW. (TX 11118 at -939; IP Further Supp. Resps. to NCR's Interrog., dated Dec. 2, 2014, Ex. 11 (TX 12440).)

51. Plant 11 did not operate any lagoons, landfills or impoundments on-site to deposit its solid waste. (TX 11118 at -947.)

(3) Kalamazoo Vegetable Parchment Mill

52. The Kalamazoo Vegetable Parchment Mill (the “KVP Mill”) was located along the west bank of the Kalamazoo River, in Work Area 1-C of OU5, between the confluence of Portage Creek and the Kalamazoo River and the Plainwell No. 1 dam. (TX 11117 at -716-17.)

53. The KVP Mill operated from 1909 until November 2000, primarily manufacturing parchment and other specialty papers. (TX 11117 at -716-717; -762 (Tables 2-1 & 2-2); GP Resps. to Weyerhaeuser’s First Phase II Interrogs., dated Feb. 28, 2014, at 25 (TX 12287); Woodard R. (12/5/2014) at 29 (TX 4555).) The KVP Mill did not maintain deinking operations. (TX 11117 at -720); Woodard R. (12/5/2014) at 30 (TX 4555).)

54. The KVP Mill was owned by:

- Kalamazoo Vegetable Parchment (KVP) (1909–1960)
- KVP-Sutherland Company (1960–1966)
- Brown Company (1966–1976)
- Gulf & Western Corporation, through a controlling interest in Brown Company (1976–1980)
- James River Paper Company, Inc. (1980–1995)
- Crown Paper Company, Inc. (1995–at least 2000)

(TX 11117 at -762 (Tables 2-1 & 2-2); Woodard R. (12/5/2014) at 29 (TX 4555).)

55. For most of its operating history, the KVP Mill relied almost exclusively on purchased virgin pulp, with some high quality secondary fibers such as pre-consumer envelope clippings. (TX 11117 at 717-718; GP Resps. to Weyerhaeuser’s First Phase II Requests, dated Feb. 28, 2014, at 21 (TX 12287); *see* Woodard R. (12/5/2014) at 29 (TX 4555); Werner R. (1/30/2015) Attach. C, 14 (TX 5802).) However, from May 1975 to May 1977, approximately 40-50% of the KVP Mill’s furnish was pulp deinked at the Sutherland Mill. (TX 11117 at -718; Woodard R. (12/5/2014) at 29-30 (TX 4555); *see supra* ¶ 41; Werner R. (1/30/2015) Attach. C, 14 (TX 5802).)

56. Effluent from the KVP Mill was treated in a series of settling lagoons from 1946 through July 1977, when the KVP Mill installed a primary clarifier and secondary treatment aeration lagoon system. (TX 1117 at -740; Ram R. (1/30/2015) at 129-130 (TX 218).) The KVP Mill never connected to the Kalamazoo POTW. (GP Resps. to Weyerhaeuser’s First Phase II Requests, dated Feb. 28, 2014 at 27 (TX 12287); TX 11117 at -744; Woodard R. (12/5/2014) at 50 (TX 4555).)

57. Beginning around the 1950s, the KVP Mill deposited the majority of its wastewater sludge in an on-site landfill that also received waste from the Sutherland Mill. (TX 11117 at -747-48; GP Resps. to Weyerhaeuser’s First Phase II Requests, dated Feb. 28, 2014, at 27 (TX 12287); *see supra* ¶ 45.)

(4) Hawthorne Mill

58. The Hawthorne Mill was located along the Kalamazoo River in Kalamazoo, Michigan, and in Work Area 1-B of OU5, between Morrow Dam and the confluence Portage Creek and the Kalamazoo River. (*See* 11107 at -367.)

59. The Hawthorne Mill was a non-deinking mill that operated from before the Production Period until December 1975 and produced “uncoated, free-sheet white and colored paper.” (TX 11786 at -218; TX 11107 at -367; IP’s Further Supp. and Restated Resps. to Certain of NCR’s Interrogs., dated Dec. 2, 2014, Ex. 3 (TX 12440).)

60. The Hawthorne Mill was owned by:

- W&L Slavin (1950–1968)
- Gould Paper Company (1969–1975)
- Georgia-Pacific (1975–late 1970s, when demolished)

(TX 11786 at -219; TX 11107 at -367.)

61. The Hawthorne Mill’s furnish consisted of at most 5% wastepaper. (TX 11786 at -221); Woodard R. (12/5/2014) at 37 (TX 4555).) From 1968 to 1974, the Hawthorne Mill used bleached envelope clippings as furnish. In the 1970s, the Hawthorne Mill used ledger-grade wastepaper. (TX 12440; Woodard R. (12/5/2014) at 37 (TX 4555).)

62. Effluent from the Hawthorne Mill was treated at a 50-foot clarifier beginning in 1954, and in 1967, the Hawthorne Mill started sending its effluent to Kalamazoo POTW. (TX 12440; Woodard R. (12/5/2014) at 43 (TX 4555).)

63. The Hawthorne Mill deposited its solid waste off-site from its mill property. (TX 11786 at -219.)

(5) Bryant Mill

64. The Bryant Mill was located along the west bank of Portage Creek in Kalamazoo, Michigan, and in Work Area 1A of OU5, three miles upstream from Portage Creek’s confluence with the Kalamazoo River. (TX 4877 at -730, -816.)

65. The Bryant Mill operated from 1895 through 1997, manufacturing a variety of coated and uncoated papers. (TX 4877 at -728-29, -734; Woodard R. (12/5/2014) at 27 (TX 4555).) The Bryant Mill deinked from 1956 to 1971, with some intermittent shutdowns. (TX 4877 at -731-32; Woodard R. (12/5/2014) at 27 (TX 4555).)

66. The Bryant Mill was owned by:

- Bryant Paper Company, which later became Time Inc. (1895–1946)
- St. Regis Corporation (1946–1966)
- Allied Paper Corporation (1966–1989)
- Performance Papers (1989–1997)
- In 1992, Performance Papers leased the Bryant Mill to Portage Paper, which operated the Bryant Mill until February 1997

(TX 4877 at -728-29.)

67. The Bryant Mill used a mixture of virgin and deinked pulp until it stopped deinking in December 1971, at which point it began using virgin pulp exclusively. (TX 11946 at -623-624; TX 4877 at -731; TX 4941; Woodard R. (12/5/2014) at 36 (TX 4555).)

68. Effluent from the Bryant Mill received primary treatment beginning in 1954, and received further treatment at the Monarch clarifier or secondary treatment at the Kalamazoo POTW beginning in 1969. (TX 4877 at -775-776); Woodard R. (12/5/2014) at 42-43 (TX 4555); Ram R. (1/30/2015) at 181 (TX 218); Farrand R. (12/5/2014) at 7 (TX 4518).)

69. The Bryant Mill deposited its solid waste at the Type III Landfill and Western Disposal Area on the Allied property. (MHI Questionnaire at -787 (TX 4877); Werner R. (1/30/2015) Attach. E (TX 5802).)

(6) Fountain Street Mill

70. The Fountain Street Mill is located along the north bank of the Kalamazoo in Battle Creek, Michigan, upstream of Morrow Dam and the Site. (TX 11789 at -275.)

71. The Fountain Street Mill began operating in 1907 and exclusively produced food-grade paperboard for folding cartons. (TX 11789 at -73, -75, -80.) The Fountain Street Mill did not maintain deinking operations. (Daly Deposition, 8/26/14: 113:12-14 (TX 353).)

72. The Fountain Street Mill was owned by the following entities:

- Michigan Carton Company (1968–unknown)
- St. Regis Corporation (unknown–1984)
- Michigan Holding Corporation, which later became the Michigan Paperboard Company (1984–at least as of May 2003)

(TX 11852; TX 11789 at -276.)

73. The Fountain Street Mill's furnish was approximately 70% wastepaper, most of which was newspaper. (TX 4139 at -60; TX 11789; TX 4993 at -192.) The Fountain Street Mill likely did not purchase CCP broke during the Relevant Period. (TX 11789 at -281.)

74. The Fountain Street Mill began sending its effluent to the Battle Creek Publicly Operated Treatment Works ("Battle Creek POTW") in 1959. (TX 4875 at -936.)

(7) Angell Street Mill

75. The Angell Street Mill was located along the south bank of the Kalamazoo River in Battle Creek, Michigan, upstream of Morrow Dam and the Site. (TX 11792 at -400.)

76. The Angell Street Mill began operating before the Production Period and manufactured “100% non-deinked paperboard for use in folding cartons.” (TX 11792 at -400, -402.)

77. The Angell Street Mill was owned by:

- Michigan Carton Company (1947–unknown)
- St. Regis Corporation (unknown)
- Champion Corporation (unknown)
- Waldorf Corporation (1985–1997)
- Rock-Tenn Company (1997–at least May 2003)

(TX 11792 at -402.)

78. The Angell Street Mill’s furnish was made up of approximately 70% wastepaper, most of which was newspaper. (TX 11852 at -60; TX 4993 at -192.)

79. The Angell Street Mill connected to the Battle Creek POTW in 1959. (TX 4875 at -936.)

(8) MacSimBar Mill

80. The MacSimBar Mill, also known as the Otsego Mill, was located along the Kalamazoo River in Otsego, Michigan, and in Work Area 3 of OU5, between the Otsego dam and the Otsego City Dam. (TX 11122 at -306.)

81. The MacSimBar Mill operated from 1906 until at least 1987, primarily manufacturing paperboard. (TX 11122 at -306-08); Woodard R. (12/4/2014) at 32 (TX 4555).) The MacSimBar Mill did not maintain deinking operations. (TX 11122 at -311; Woodard R. (12/4/2014) at 32 (TX 4555).)

82. The MacSimBar Mill was owned by:

- MacSimBar Paper Company (1906–1944)
- United Biscuit Company (1944–1960)
- Waldorf Paper Products, a division of United Biscuit Company (1960–1966)
- Hoerner-Waldorf Corporation (1966–1968)
- The Mead Corporation (1968–1987)
- Rock-Tenn Corporation (1987– unknown)

(TX 11122 at -307).)

83. From 1952 until 1968, the MacSimBar Mill's furnish comprised "approximately 30% mixed waste and 70% corrugate, kraft and telephone books." (TX 11122 at -314; *see* Scott R. (12/5/2014) ¶ 224 (TX 2506); Woodard R. (12/5/2014) at 42 (TX 4555); Werner R. (1/30/2015) Attach. C, 21 (TX 5802).)

84. Effluent from the MacSimBar Mill received primary clarifier wastewater treatment beginning in 1953, and secondary treatment beginning in 1960. (*See* TX 11122 at -334-35; Woodard R. (12/5/2014) at 49 (TX 4555).) The MacSimBar Mill never connected to a publicly operated treatment plant. (TX 11122 at -343-44; Woodard R. (12/5/2014) at 51.)

85. The MacSimBar Mill deposited its solid waste on at a landfill located a third of a mile north of the mill property. (TX 11122 at -345; TX 4991 at -857.)

(9) Plainwell Mill

86. The Plainwell Mill, also known as the Hamilton Mill, was located along the north bank of the Kalamazoo River in Plainwell, Michigan, and in Work Area 1C of OU5, between the confluence of Portage Creek and the Kalamazoo River and the Plainwell No. 1 dam. (TX 4251 at -741.)

87. The Plainwell Mill operated from 1886 through November 2000, primarily manufacturing uncoated printing papers. (TX 4251 at -747; Woodard R. (12/5/2014) at 30 (TX 4555).) The Plainwell Mill maintained deinking operations from before the Production Period through January 1963. (TX 4251 at -742, -747; Woodard R. (12/5/2014) at 30 (TX 4555).)

88. During its period of deinking, the Plainwell Mill's furnish comprised 40-60% deinked stock, most of which was made from #1 heavy book and magazine. (TX 4251 at -744; Woodard R. (12/5/2014) at 39 (TX 4555).) After the Plainwell Mill ceased deinking in January 1963, "the furnish consisted primarily of purchased virgin pulp." (TX 4251 at -745).

89. The Plainwell Mill was owned by:

- Michigan Paper Company of Plainwell (1886–1954)
- Hamilton Paper Company of Pennsylvania (1954–1961)
- Hamilton Paper Company of Washington (1961–1963)
- Weyerhaeuser Company (1963–1970)
- Milprint Inc./Philip Morris Inc./Nicolet Paper Company (1970–1985)
- Chesapeake Corporation (1985–1987),
- Simpson Plainwell Paper Company (1987–1997)
- Plainwell Holding Company/Plainwell, Inc. (1997–2000)

(TX 4251 at -741; Woodard R. (12/5/2014) at 30 (TX 4555).)

90. Prior to 1964, the Plainwell Mill primarily produced uncoated printing and writing grades of paper. (TX 4251 at -747; Woodard R. (12/5/2014) at 30 (TX 4555); Werner R. (1/30/2015) Attach. C, 19 (TX 5802).)

91. Effluent from the Plainwell Mill received primary wastewater treatment beginning in 1954 and secondary treatment beginning in 1967. (TX 4251 at -743, -788; Woodard R. (12/5/2014) at 47 (TX 4555); Farrand R. (12/5/2014) at 12 (TX 4518).) The Plainwell Mill did not discharge any papermill effluent to a publicly operated treatment plant. (TX 4251 at -790; Woodard R. (12/5/2014) at 51 (TX 4555).)

92. From 1955 to August 1981, the Plainwell Mill deposited its solid waste at the 12th Street Landfill. (TX 4251 at -743; Werner R. (1/30/2015) Attach. E (TX 5802); Wolfe R. (2/27/2015) at 53 (TX 4669).) The Plainwell Mill deposited its solid waste off-site thereafter. (TX 4251 at -743.)

(10) Monarch Mill

93. The Monarch Mill was located along the east bank of Portage Creek in Kalamazoo, Michigan, and in Work Area 1A of OU5. (*See* TX 4877 at -730, -816.)

94. The Monarch Mill operated from 1875 through 1980, but was temporarily shut down from January 1958 through September 1959. (TX 4877 at -729, -731; Woodard R. (12/5/2014) at 30 (TX 4555).) The Monarch Mill produced a variety of coated and uncoated papers until 1958, and when the Monarch Mill reopened in 1959, it primarily produced carbon paper tissue and book printing paper. (TX 4877 at -734; Woodard R. (12/5/2014) at 30 (TX 4555).) The Monarch Mill deinked from at least 1950 through 1957. (TX 4877 at -732; Woodard R. (12/5/2014) at 30 (TX 4555).)

95. The Monarch Mill was owned by:

- Samuel A. Gibson Paper Company, which had previously been the Kalamazoo Paper Company (1875–1922)
- Allied Paper Mills, which later became Allied Corporation (1922–1980)

(TX 4877 at -729); Woodard R. (12/5/2014) at 30 (TX 4555).)

96. Until 1958, the Monarch Mill's furnish comprised a mixture of virgin pulp and deink stock, the latter of which was mostly magazines. (Woodard R. (12/5/2014) at 44 (TX 4555); TX 4877 at -742; Frazier R. (12/5/2014) ¶ 40 (TX 4641).) Upon reopening in 1959, and through its closure in October 1980, the Monarch Mill used exclusively virgin pulp. (Woodard R. (12/5/2014) at 44 (TX 4555).)

97. Effluent from the Monarch Mill received primary wastewater treatment beginning in 1953. (TX 4877 at -776; Farrand R. (12/5/2015) at 14 (TX 4518).) The Monarch Mill never connected to a publicly operated treatment plant. (TX 4877 at -785; Woodard R. (12/5/2014) at 50 (TX 4555).)

98. The Monarch Mill deposited its solid waste at the Type III Landfill and Western Disposal Area on the Allied property. (TX 4877 at -787; Werner R. (1/30/2015) Attach. E (TX 5802).)

(11) King Mill

99. The King Mill was located along the south bank of the Kalamazoo River in Kalamazoo, Michigan, and in Work Area 1B of OU5, between Morrow Dam and the confluence of Portage Creek and the Kalamazoo River. (TX 4877 at -730, -816.)

100. The King Mill operated from 1901 until 1971, primarily manufacturing coated and uncoated printing materials. (TX 4877 at -731, -734.) The King Mill deinked stock from at least 1950 until June 1965. (TX 4877 at -732; Woodard R. (12/5/2014) at 28 (TX 4555).) The King Mill ceased deinking entirely in 1965. (TX 4877 at -732.)

101. The King Mill was owned by:

- Allied Corporation, formerly known as Allied Paper Mills (1922–1971)
- Dore Wrecking Company (1971–1978)

(TX 4877 at -729.)

102. Effluent from the King Mill received primary treatment starting in 1955. (TX 4877 at -777); Woodard R. (12/5/2014) at 43-44 (TX 4555); Ram R (1/30/2015) at 92 (TX 218).) The King Mill did not utilize secondary treatment and never connected to a POTW. (MHI Questionnaire at -777 (TX 4877); Woodard R (12/5/2014) at 50 (TX 4555).)

103. Until 1971, the King Mill dewatered paper residuals at the A-Site landfill. (TX 4877 at -787-87; Werner R. (1/30/2015) Attach. E (TX 5802).)

(12) Rex Mill

104. The Rex Mill was located along the south bank in Kalamazoo, Michigan, and in Work Area 1B of OU5, between Morrow Dam and the confluence of Portage Creek and the Kalamazoo River. (TX 4877 at -730, -816.)

105. The Rex Mill operated from 1915 through 1968, primarily manufacturing various types of coated and uncoated printing papers. (TX 4877 at -729, -730, -734-35; *see* Woodard R. (12/5/2014) at 31.) The Rex Mill deinked as early as 1950. (TX 4877 at -733; Woodard R. (12/5/2014) at 31 (TX 4555).)

106. The Rex Mill was owned by:

- Rex Paper Company (1915–1958)
- Butler Company (1958–March 1967)
- Allied Corporation (March 1967–September 1967)
- Eaton-Dikeman Company (March 1967–1968, when production ceased)

(TX 4877 at -729-30; *see* Woodard R. (12/5/2014) at 31 (TX 4555).)

107. The recovered paper deinked at the Rex Mill consisted of “[c]olored ledgers and writings, tabulating cards, No. 1 heavy books and magazines.” (TX 2511 at -238; Scott R. (12/5/2014) ¶ 89 (TX 2506); Woodard R. (12/5/2014) at 39 (TX 4555).)

108. Effluent from the Rex Mill received primary wastewater treatment in a 50-diameter settling tank beginning in 1954. (TX 4877 at -759, -777; TX 5848; Woodard R. (12/5/2014) at 47 (TX 4555).) The Rex Mill connected to the Kalamazoo POTW in 1967. (TX 11203 at -921; Woodard R. (12/5/2014) at 51 (TX 4555).)

(13) Otsego-Menasha Mill

109. The Otsego-Menasha Mill was located along the Kalamazoo River in Otsego, Michigan, and in Work Area 3 of OU5, between the Otsego Dam and the Otsego City Dam.

110. The Otsego-Menasha Mill was owned by the Menasha Corporation from 1955 until at least 2003. (TX 11788 at -247.)

111. The Otsego-Menasha Mill was a non-deinking mill that manufactured food-grade corrugated medium paper. (TX 11788 at -238; Werner R. (1/30/2015) at Attach. C, at 23-24 (TX 5802).) The Otsego-Menasha Mill used exclusively virgin pulp prior to 1957 and a mixture of virgin pulp and DLK and OCC grades of recovered paper thereafter. (TX 11788 at -254.)

112. Effluent from the Otsego-Menasha Mill was treated in settling ponds from 1954 through 1989 before being discharged to the Kalamazoo River. (TX 11788 at -256-60.) During this period, the Otsego-Menasha Mill did not direct any of its effluent to a municipal wastewater treatment facility. (TX 11788 at -257; Woodard R. (12/5/2014) at 51 (TX 4555).)

113. The Otsego-Menasha Mill deposited its solid waste at an on-site landfill at the mill property. (TX 11788 at -252; TX 11434 at -289-90.)

(14) National Gypsum Mill

114. The National Gypsum Mill was located along the south bank of the Kalamazoo River in Kalamazoo Township, Michigan and in Work Area 1B of OU5 between Morrow Dam and the confluence of Portage Creek and the Kalamazoo River. (TX 11791 at -301.)

115. The National Gypsum Mill operated from at least 1947 until 1981, producing the gypsum wallboard liner paper. (TX 11791 at -301); Rynbrand 10/27/2014 Dep. Tr. at 22 (TX 376); Woodard R. (12/5/2014) at 32 (TX 4555).) The National Gypsum Mill did not maintain deinking operations. (Rynbrand 10/27/2014 Dep. Tr. at 29 (TX 376) ; Scott R. (12/05/2014) ¶ 103 (TX 2506); Woodard R. (12/5/2014) at 29 (TX 4555).)

116. The National Gypsum Mill was owned by the National Gypsum Company from 1947-1981. (TX 11791 at -301; Woodard R. (12/5/2014) at 32 (TX 4555).)

117. The National Gypsum Mill used 100% recovered paper as its furnish, including newspaper, used corrugated containers, ground wood shavings, mixed paper, and double-lined kraft. (Rynbrand 10/27/2014 Dep. Tr. at 21:21-23 (TX 376); Scott R. (12/05/2014) ¶ 107 (TX 2506); Woodard R. (12/5/2014) at 41 (TX 4555).)

118. Effluent from the National Gypsum began receiving primary treatment sometime between 1960 and 1967. (See TX 11791 at -302; Woodard R. (12/5/2014) at 50 (TX 4555); Ram

R. (1/30/2015) at 137 (TX 218).) The National Gypsum Mill did not operate secondary treatment (TX 11791 at -305), however it connected to the POTW in 1967 (TX 11756 at -129; TX 11791 at -302; Woodard R. (12/5/2014) at 51 (TX 4555).)

(15) Publicly Owned Treatment Works

119. The City of Kalamazoo POTW is located along the western bank of the Kalamazoo River downstream from the confluence of Portage Creek and the Kalamazoo River in Kalamazoo, Michigan.

120. The Kalamazoo POTW began operation in February 1955. (TX 11756 at -828; Ram R. (1/30/2015) at 63 (TX 218).) The initial POTW used primary treatment only. (*Id.*)

121. In May 1967, the POTW was expanded to include secondary treatment. (TX 11756 at -818; Ram R. (1/30/2015) at 65 (TX 218).) Once the secondary treatment system was installed, wastewater flows from various paper mills began to be discharged to the plant. (TX 11756 at -819.) Because the mill wastewater had already received primary treatment at each mill, these wastewater flows were sent directly to secondary treatment. (*Id.*)

121.1 The KPC Mill, the Rex Mill, the Hawthorne Mill, the National Gypsum Mill and the Sutherland Mill all began sending their clarified effluent to the Kalamazoo POTW in May 1967. (TX 11110 at -689-90; TX 11785 at -216; TX 11113 at -423, 425; TX 12287 at -27; 12/2/2014 IP Resps. to NCR's Interrogs., Ex. 3 (TX 12440); TX 11791 at -302; TX 11203 at -912; Woodard R. (12/5/2014) at 51; TX 11756 at -827.)

121.2 The Bryant Mill began sending its effluent to the Kalamazoo POTW in 1969. (TX 4877 at -775-776; Ram R. (1/30/2015) at 57 (TX 218).)

D. Polychlorinated Biphenyls

122. PCBs belong to a family of man-made organic chemicals known as chlorinated hydrocarbons. (TX 12364.) In the United States, Monsanto was the sole manufacturer of PCBs beginning in the 1930s. (TX 3570 at -284.)

123. PCBs were used in hundreds of industrial and commercial applications from the 1930s through the 1970s. (TX 12364.) The largest volume use of PCBs was as a dielectric in electrical equipment. PCBs were also used in hydraulic fluids, heat transfer fluids, compressor fluids, cutting fluids and lubricants; in "plasticizer" applications, such as paints, polishes, waxes, lacquers, inks, caulks, coatings, gaskets, insulation, and roofing and siding material; in pressure-sensitive record and color-copying papers; in thermographic duplicating processes; in xerox-related paper products, such as printing plates and copy toner; and in paper and printing applications, such as CCP. (TX 12364; Williams R. (12/3/2014) at 21-23 (TX 2580).)

124. Aroclor 1242 was one of several different PCB mixtures manufactured and sold by Monsanto under the Aroclor trade name. (Williams R. (12/3/2014) at 10 n.13 (TX 2580).) In general, Monsanto named its Aroclors to indicate the amount of chlorination contained in each product. (Williams R. (12/3/2014) at 20 (TX 2580).) For example, Aroclor 1242 was 42 percent

chlorinated on average while Aroclor 1254 was 54 percent chlorinated. (Williams R. (12/3/2014) at 20 (TX 2580).)

125. In December 1966, the *New Scientist* magazine published a, “Report of a New Chemical Hazard”, stating that the Swedish Scientist Soren Jensen had found PCBs in environmental samples. (TX 1459 at -427; TX 1466.) The article went on to state that “[i]t is not known at present how much of this substance is dangerous or even fatal.” (TX 1459 at -427.)

125.1 Jensen’s 1966 publication was the first time that PCBs (as a class of chemicals) had been identified in the environment. (Williams R. (12/3/2014) at 1 (TX 2580).)

125.2 Jensen identified a PCB-mixture similar to Aroclor 1254. (TX 1466 at -051; *see infra* ¶ 329)

125.3 The first public findings of traces of Aroclor 1242 in the environment occurred after the Production Period ended in April 1971. (*See infra* § III.E(4).)

126. In February 1970, Monsanto sent a letter to its Aroclor 1254 and 1260 customers alerting them to publicity about PCBs in the environment. In the letter Monsanto stated that “PCBs with a chlorine content of less than 54% have not been found . . . and appear to present no potential problem to the environment”. (TX 11098; TX 11094; TX 1556.)

127. In April 1970, Monsanto issued a press release stating its awareness of possible environmental concerns over PCBs. (TX 3569 at -242.) The press release assured customers that only higher-chlorinated PCBs have been found in the environment. (TX 3569 at -243.)

128. Monsanto repeatedly assured customers that “Aroclor 1242 . . . has not been [indicted] as an environmental contaminant”. (TX 3585; TX 11660 (“PCBs with a chlorine content of less than 54% have not been found in the environment”).)

129. In this time period, NCR met with Monsanto and communicated that NCR would withdraw from the CCP business unless Monsanto came up with an alternative to Aroclor 1242 on a “timely basis”. (Gossage 11/7/2014 Dep. Tr. at 35:13-36:13, 36:18-38:15; 41:4-42:8 (TX 358).)

130. By April 1971, NCR ceased using Aroclor 1242 in CCP emulsion. (Phase I PTO at 4, ¶ 11.)

131. In a May 1972 report concerning PCBs, a Federal Interdepartment Task Force on PCBs stated that after reviewing “all of the available scientific information on various aspects” of the PCB issue, it “found much data that it regards as inadequate and many questions that remain unanswered”. (TX 3570 at -281.) Further, the Task Force stated that “[a]t the levels in which they are found, PCBs do not appear to present an imminent hazard” to humans and that the “acute toxicity of commercial PCBs in experimental animals appears to be low”. (TX 3570 at -296-297.) The Task Force also observed that “[t]here currently are no toxicological or

ecological data available to indicate that the levels of PCBs currently known to be in the environment constitute a threat to human health.” (TX 3570 at -282.)

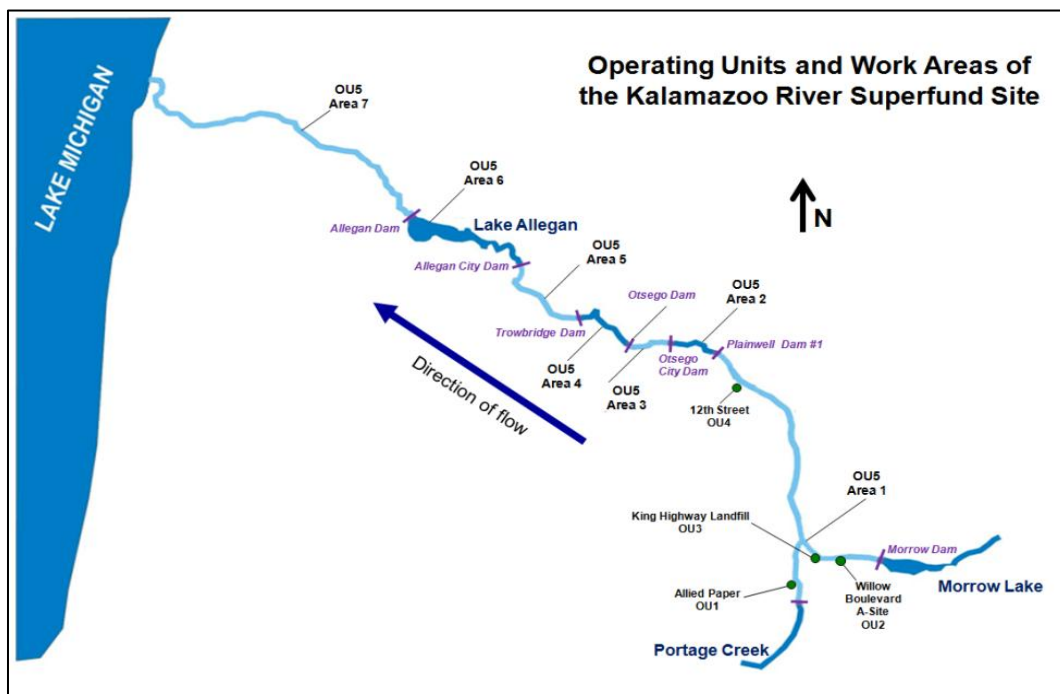
132. In spring of 1972, EPA, for the first time, issued guidance that prospective water releases of all types of PCBs, including Aroclor 1242, should be minimized based on the absence of complete Aroclor-specific information on environmental fate, transport, degradation, bioaccumulation, and toxicity. (TX 11095 at -572; TX 11567; Williams R. (12/3/2014) at 12-13 (TX 2580).)

133. In 1979, the EPA prohibited the continued use of PCBs, except for certain uses and exemptions, including an exemption for the use of existing CCP. (TX 3484.) In exempting CCP from its ban, the EPA stated that “[t]he amount of PCB on each sheet of carbonless copy paper is extremely small. In view of these practical considerations and because the potential PCB exposure and risks to human health or the environment are negligible, EPA has concluded that this activity does not present an unreasonable risk and is authorizing the continued use of existing PCB carbonless copy paper”. (*Id.*; Williams R. (12/3/2014) at 61 (TX 2580).)

E. The Site

134. The Site was listed on the National Priorities List as a superfund site in 1990. (TX 2175 at 17-18.)

135. The Site “is located in Allegan and Kalamazoo Counties, Michigan. [It] includes disposal areas, paper mill properties, approximately 80 miles of the Kalamazoo River (from Morrow Dam to Lake Michigan), adjacent river banks and contiguous floodplains, as well as a 3-mile stretch of Portage Creek.” (TX 2175 at 7.) The EPA has identified seven current or former operable units at the Site.



(1) Allied Paper Inc./Bryant Mill Pond – OU1

136. The Allied Paper Inc./Bryant Mill Pond (OU1) is an 89-acre, inactive disposal area located along Portage Creek containing paper mill wastes contaminated with PCBs. (*See* TX 2175 at 20.)

137. OU1 encompasses the 29-acre Bryant Mill Pond, two commercial properties, and four former operational areas, including (i) former dewatering lagoons that received paper mill residuals from the Bryant Mill; (ii) former dewatering lagoons that received paper mill residuals from the Monarch Mill; (iii) a landfill property, and (iv) a 19-acre disposal area referred to as the Western Disposal Area that received dewatered paper mill residuals from dewatering lagoons. (TX 2175 at 21-22.)

138. OU1 received paper mill waste from the Bryant and Monarch Mills until the late 1980s. (TX 2175 at 21; TX 4877 at -710; Hagen R. (1/30/2015) at 4, 7 (TX 2452); Wolfe R. (2/27/15) at 23-24 (TX 4669).)

(2) Willow Boulevard/A-Site Landfill – OU2

139. The Willow Boulevard/A-Site Landfill (OU2) is an inactive disposal area containing paper mill wastes contaminated with PCBs. (*See* TX 2175 at 24.) It is located on the south side of the Kalamazoo River, approximately two miles upstream from the confluence of the Kalamazoo River and Portage Creek. (TX 2175 at Figure 4.)

140. OU2 comprises two principal properties: (i) the A-Site Landfill, approximately 22 acres in size and (ii) the Willow Boulevard Landfill, approximately 11 acres in size. (TX 2175 at 24.)

141. The Willow Boulevard Landfill received paper mill waste from KPC from approximately 1967–1975. The A-Site Landfill received paper mill waste from the King Mill from 1960–1971 and from the KPC Mill from 1975 – 1987. (TX 2175 at 25; TX 11107 at -469, -473, -475; Hagen R. (1/30/2015) at 4, 5, 7 (TX 2452); Wolfe R. (2/27/2015) at 40, 49 (TX 4669).)

(3) King Highway Landfill – OU3

142. The King Highway Landfill (OU3) is an inactive disposal area containing paper mill wastes contaminated with PCBs. (TX 2175 at 27-28.) It is located on the south side of the Kalamazoo River, upstream from the confluence of the Kalamazoo River and Portage Creek and directly south of the former KPC mill site. (TX 2175 at Figure 6.)

143. OU3 comprises the King Highway Landfill, approximately 15 acres in size, and approximately 7 acres of former KPC dewatering lagoons on the north side of the Kalamazoo River, and the King Street Storm Sewer. (TX 2175 at 27-28.)

144. The King Highway lagoons received paper mill waste from the KPC Mill from the late 1950s until 1977. KPC continued to deposit paper mill waste at the landfill from

1977-1997. (TX 2175 at 27-29; TX 11107 at -382, -427, -470; Hagen R. (1/30/2015) at 5-7 (TX 2452); Wolfe R. (2/27/2015) at 49 (TX 4669).)

(4) 12th Street Landfill – OU4

145. The 12th Street Landfill (OU4) is an inactive disposal area containing paper mill wastes contaminated with PCBs. (TX 2175 at 31-32.) It is located on the west side of the Kalamazoo River immediately downstream from the Plainwell Dam. (TX 2175 at Figure 8.) OU4 includes only the 12th Street Landfill, which is approximately 6.5 acres in size. (TX 2175 at 31-32.)

146. It received paper mill waste from the Plainwell Mill from approximately 1955–1981. (TX 2175 at 32, 37; TX 4251 at -741.)

(5) Kalamazoo River and Portage Creek – OU5

147. The river portion of the Site (OU5) is made up of “approximately 80 miles of the Kalamazoo River (from Morrow Dam to Lake Michigan), adjacent river banks and contiguous floodplains, as well as a 3-mile stretch of Portage Creek”. (TX 2175 at 7.) Parts of OU5 are contaminated with PCBs principally released by former paper mill operations. (TX 2175 at 34.)

148. For the purposes of removal and remediation activity, the EPA has divided OU5 into seven “work areas”. (TX 2175 at Figure 10.)

148.1 Area 1: Kalamazoo River from Morrow Dam downstream to Plainwell Dam and the lower portion of Portage Creek;

148.2 Area 2: Kalamazoo River from Plainwell Dam downstream to the Otsego City Dam;

148.3 Area 3: Kalamazoo River from Otsego City Dam downstream to Otsego Dam;

148.4 Area 4: Kalamazoo River from Otsego Dam downstream to Trowbridge Dam;

148.5 Area 5: Kalamazoo River from Trowbridge Dam downstream to Allegan City Dam;

148.6 Area 6: Lake Allegan; and

148.7 Area 7: Kalamazoo River from Allegan Dam downstream to Lake Michigan.

148.8 For ease of reference in this litigation, Area 1 is subdivided into Area 1A for the stretch of Portage Creek within the bounds of the Site; Area 1B for the stretch of the Kalamazoo River between Morrow Dam and the confluence of Portage Creek and the

Kalamazoo River; and Area 1C for the stretch of the Kalamazoo River between the confluence of Portage Creek and the Kalamazoo River and the Plainwell Dam.

149. The EPA has not yet finalized a remedy for any portion of the Kalamazoo River. (Saric 3/19/2015 Dep. Tr. at 183:4-7 (TX 377).)

(6) Former GP Mill Property – OU6

150. The Former GP Mill Property (OU6) is “located north of OU2, across the Kalamazoo River” and included “the former Refuse Area of the former Georgia-Pacific Kalamazoo Mill Property and . . . the Oxbow Area of the former Hawthorne Mill property”. (TX 2175 at 26.)

(7) Former Plainwell Mill Property – OU7

151. The Former Plainwell Mill Property (OU7) is a 34 acre mill property located on the west side of the Kalamazoo River upstream from the Plainwell Dam. (TX 2175 Figure 11.)

F. Response Activity

152. In December 1990, three PRPs—HM Holdings, Inc./Allied Paper Inc., GP, and Simpson Plainwell Paper Company—formed the Kalamazoo River Study Group (the “KRSG”) in an effort to coordinate response actions at the Site. (TX 5530 at 578.) Fort James Corporation, another PRP, later joined the KRSG. (TX 5530 at 578.)

153. HM Holdings, Inc./Allied Paper Inc. (“Allied”) was a former PRP at the Site. *Kalamazoo River Study Group v. Rockwell Int’l Corp.*, 274 F.3d 1043, 1045-46 (6th Cir. 2001).

153.1 Allied leased the Bryant Mill from St. Regis from 1956-1966 and then purchased the property from St. Regis in 1966. Allied sold the Bryant Mill to Performance Papers in 1989. (TX 4877 at -728-29.)

153.2 Allied owned the Monarch Mill from 1922 until 1980 when the Mill was dismantled. (TX 4877 at -729.)

153.3 Allied owned the King Mill from 1922 until 1971 when it was sold to the Dore Wrecking Company. (TX 4877 at -729.)

153.4 Allied purchased the Rex Mill in March 1967 and sold the Mill to Eaton-Dikeman Company in September 1967. (TX 4877 at -729-30.)

153.5 Millennium Holdings, Inc. became the corporate successor to Allied in 1996. (TX 11385 at -842; TX 4877 at -728.)

153.6 On January 6, 2009, Lyondell Chemical Company (“Lyondell”), which included Millennium Holdings, filed for bankruptcy protection. (TX 12300.)

153.7 Lyondell agreed to make cash payments totaling \$61,628,150 in settlement of objections to proof of claims filed by the EPA and other agencies. With respect to the Kalamazoo River Site, the EPA was to receive a cash payment in the amount of \$49,549,379. (TX 12300.)

153.8 Lyondell also agreed to deposit an additional \$108,421,850 into an Environmental Custodial Trust Account. (TX 12009 at -443.) Of that amount, \$53,721,850 of the funds was allocated with respect to the Allied Paper Mill. (TX 12300 ¶ 18.)

154. Simpson Plainwell Paper Company (“Plainwell”) is a former PRP at the Site. (*Kalamazoo River Study Group v. Rockwell Int’l Corp.*, 274 F.3d 1043, 1045-46 (6th Cir. 2001).)

154.1 The Plainwell Mill was owned by Plainwell in 1987-1996. (TX 11793 at -078.)

154.2 Plainwell was became Plainwell Inc., and owned the Plainwell Mill from 1996-2000. (TX 11385 at -842; TX 11793 at -078.)

154.3 On November 21, 2000, Plainwell Inc. and Plainwell Holding Company filed for bankruptcy protection. Pursuant to an Environmental Settlement Agreement and Order, the Plainwell Debtors agreed to pay \$7,150,000 to the EPA, the State of Michigan and other federal agencies. (TX 12301 at 6.)

(1) The 1990 AOC

155. Effective December 28, 1990, MDNR entered into an Administrative Order by Consent (the “1990 AOC”) with the KRSG’s then-current members. The 1990 AOC called for the KRSG members to perform a Site-wide Remedial Investigation/Feasibility Study (“RI/FS”). (TX 1003 ¶¶ 9a, 13.)

156. In accordance with the 1990 AOC, the KRSG performed investigations at OU2 and OU3 beginning in the early 1990s, and in 1994 it completed a draft Remedial Investigation and Focused Feasibility Study report for OU3. (TX 2175 at 25; TX 4963 at 1; TX 4961 at 1.) In 1993 and 1994, the KRSG conducted Remedial Investigations (“RIs”) at OU5. (TX 2391 at -193.)

157. In October 2000, the KRSG submitted a draft RI/FS for OU5, which called for bank stabilization and monitored natural attenuation. (TX 12010 at -956; TX 11782 at -729.) In 2002, MDEQ rejected the draft RI/FS and requested that EPA take over as the lead agency at the Site. (TX 12025.)

158. Effective on September 28, 2007, the 1990 AOC was terminated by an Administrative Order by Consent for Termination (the “2007 Termination AOC”) between the State of Michigan (through MDEQ and the Michigan Department of Attorney General (“MDAG”)), GP, and Millennium Holdings, Inc., as the successor to KRSG member HM Holdings, Inc./Allied Paper, Inc. (“Millennium”), on the ground that “the objectives of the [2007] Federal SRI/FS [AS]AOC are consistent with the objectives of the State 1990 AOC”, and

in exchange for GP's agreement to pay certain costs expended by MDEQ. (TX 4515 at -624.) The 2007 Termination AOC was effected after GP and EPA entered into an Administrative Settlement and Order on Consent ("ASAOC") for performance of a Supplemental RI/FS. (TX 12008.)

(2) The KRSB Litigation

159. In 1995, the KRSB, of which Georgia-Pacific was a member, filed a complaint against Rockwell International, Eaton Corporation and others. (TX 11779.) Despite asserting that the majority of PCB contamination at the Site resulted from the recycling of CCP, the KRSB did not name NCR as a defendant. (TX 11385 at -847.)

160. In its 1995 complaint, the KRSB asserted claims under CERCLA §§ 107 and 113 seeking costs it had allegedly incurred and expected to incur in connection with the cleanup of PCBs at the Site, including a declaratory judgment "[a]djudging and declaring that if [the KRSB] is at any time found liable to the United States under CERCLA (or to any other party or under any other law) for any response costs at the Site other than those incurred by Plaintiff complying with the [1990 AOC], then each Defendant is jointly and severally liable to Plaintiff for complete indemnification or reimbursement, or for contribution of an equitably apportioned share, of all past and future response costs that [the KRSB] has incurred and will incur in connection with the Site, and any additional amounts that [the KRSB] may be required to pay by virtue of any judgment entered against it". (TX 11779 ¶ 50.)

161. At least three of the defendants in the KRSB Litigation—Rockwell, Eaton and Menasha—asserted cost recovery counterclaims against GP under § 107. (TX 11384 at -221; TX 11383 at -207; TX 11382 at -528.) Both Rockwell and Eaton asserted that "[i]n the event that [the defendant] incurs response costs in connection with the Site, then it is entitled to recover [its] response costs from [KRSB] and [its] Members, jointly and severally". (TX 11384 at -221; TX 11383 at -207.)

162. On December 7, 1998, partial judgment as to liability were entered on GP's §§ 107 and 113 claims against Rockwell and Eaton, as well as Rockwell's and Eaton's §§ 107 and 113 counterclaims against GP. (TX 11385 at -840.)

163. The KRSB litigation resulted in two allocation judgments in 2000 and 2003. (TX 12372 at 840 ("The PCB releases by Plaintiff's members are more than sufficient to justify imposing on Plaintiff the entire cost of response activities relating to the NPL Site."); TX 5525 at 23-24.)

(3) The 2000 OU3 AOC

164. In 1996, while the KRSB Litigation was pending, GP undertook response actions at OU3. In 1998, EPA issued a Record of Decision selecting a remedy for OU3. (TX 4112.)

165. Effective February 8, 2000, GP entered into an Administrative Order by Consent for Response Activity (the "2000 OU3 AOC") with MDEQ, directing GP to perform response actions at OU3. (TX 4135.)

166. The 2000 OU3 AOC provided that “[i]f the MDEQ determines that all requirements have been satisfied, the MDEQ will so notify Georgia-Pacific, and upon receipt of a Final Report for Completion of Construction . . . shall issue a Certificate of Completion of Construction”. (TX 4135 at -756-57.) It further provided that “[u]pon issuance of a Certificate of Completion . . . Georgia-Pacific’s obligations as set forth in this Consent Order shall terminate”. (TX 4135 at -757.)

167. In 2003, GP completed the remedy required by the 2000 OU3 AOC. (TX 11052 at -873.) MDEQ issued a Certificate of Completion of Construction on June 26, 2013. (TX 11998.)

(4) The 2006 OU6 ASAOC

168. Effective November 20, 2006, GP entered into an Administrative Settlement Agreement and Order on Consent for a Removal Action (the “2006 OU6 ASAOC”) with EPA, which required GP to perform a Time-Critical Removal Action (“TCRA”) at former OU6 (the GP/Fort James Mill Sites) and to reimburse certain EPA expenditures. (TX 4118; TX 4137 and TX 11001.)

169. The 2006 OU6 ASAOC stated that it “constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, . . . pursuant to which Respondent [GP] has resolved its liability to the United States” for the work performed. (TX 4118 at -658, ¶ 63(b).) It further provided that GP was entitled to “protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA” for the work and response costs at issue. (TX 4118 at -658, ¶ 63(a).) The ASAOC included a covenant by EPA “not to sue or to take administrative action against [GP] pursuant to Sections 106 and 107(a) of CERCLA” for the work or response costs contemplated by the agreement. (TX 4118 at -655, ¶ 55.)

170. GP initiated the OU6 TCRA on November 27, 2006, and completed it on June 15, 2007. (TX 11053.) On April 29, 2008, GP submitted a final completion report, which had been pre-approved on April 16, 2008. (TX 11053, TX 11054.)

171. On June 30, 2009, EPA determined that no further investigation of OU6 was required under CERCLA. (TX 11045.)

(5) The 2007 SRI/FS ASAOC

172. Effective February 21, 2007, GP entered into an Administrative Settlement Agreement and Order on Consent for Remedial Investigation/Feasibility Study (the “2007 SRI/FS ASAOC”) with EPA. (TX 12008.)

173. This ASAOC called for GP to conduct a Supplemental RI/FS at the Site after GP’s proposed 2000 RI/FS was rejected by MDEQ in 2002. (TX 12008 at -352, ¶ 18.)

174. The 2007 SRI/FS ASAOC stated that it “constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, . . . pursuant to which the Respondents have, as of the Effective Date, resolved their liability to the United States for the Work and Future Response Costs” (TX 12008 at -374, ¶ 88(b)), and that GP is entitled to “protection from

contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA” for the work and response costs at issue (TX 12008 at -374, ¶ 88(a)).

(6) The 2007 Plainwell ASAOC

175. Also effective February 21, 2007, GP entered into an Administrative Settlement Agreement and Order on Consent for Removal Action concerning the Plainwell Impoundment (the “2007 Plainwell ASAOC”) with EPA. (TX 12007.)

176. This ASAOC directed GP to complete a TCRA with respect to PCB-contaminated sediments at Plainwell Impoundment and to reimburse certain EPA expenditures. (TX 12012 at -800, -810; TX 12007 at -186-87, -238.)

177. The 2007 Plainwell ASAOC provided that it “constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, . . . pursuant to which the Respondents have, as of the Effective Date, resolved their liability to the United States and to the MDEQ” for the work performed and costs incurred. (TX 12007 at -215, ¶ 70(b).) It further provided that GP is entitled to “protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA” (*id.* at -214, ¶ 70(a)), and included a covenant by the state “not to sue or to take administrative action against the Respondents pursuant to Sections 107(a) and 113 of CERCLA” for the work or response costs (*id.* at -211, ¶ 60).

178. GP began construction on the Plainwell No. 1 TCRA in May 2007 and completed it in June 2009. (TX 11797 at -633.) GP submitted a final completion report on March 5, 2010, which EPA approved on March 30, 2010. (TX 11797; TX 11047.)

(7) The 2009 Plainwell ASAOC

179. Effective June 8, 2009, GP entered into an Administrative Settlement Agreement and Order On Consent for Removal Action concerning the Plainwell No. 2 Dam (the “2009 Plainwell ASAOC”) with EPA. (TX 1006.)

180. The 2009 Plainwell ASAOC called for GP to complete a TCRA at the Plainwell No. 2 Dam and to reimburse certain EPA expenditures. (TX 1006 at -254, 261-66.)

181. The ASAOC provided that it “constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, . . . pursuant to which the Respondent has, as of the Effective Date, resolved its liability to the United States for the Work and the Future Response Costs” (TX 1006 at -273, ¶ 64(b)) and provided that GP is entitled to “protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA” for the work and future response costs at issue (TX 1006 at -273, ¶ 64(a)). EPA covenanted “not to sue or take administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA . . . for the Work and for Future Response Costs”. (TX 1006 at -270, ¶ 55.)

182. GP performed the Plainwell No. 2 TCRA between August 2009 and October 2010. (TX 11106 at -778.) GP submitted a final completion report on February 25, 2011, which EPA approved on March 1, 2011. (TX 11046.)

(8) The 2009 OU2 Consent Decree

183. In 1997, GP submitted a draft RI/FFS for OU2, which was revised several times before November 2001, when MDEQ assumed responsibility for its completion. (TX 4114.)

184. Between 1999 and 2000, GP excavated 7,000 cubic yards of sediments, placed those sediments in the OU2 landfills, stabilized the sediments, backfilled the area, and graded the site. (Brown 8/19/2014 Dep. Tr. at 427:12-432:15 (TX 345); TX 4116 at -062.)

185. MDEQ issued the final OU2 RI/FFS in November 2004. (TX 4115.) EPA issued a ROD for OU2 in September 2006. (TX 4691.) The selected remedy involved consolidation and containment of landfill material, stabilization of the banks and placement of excavated sediments in the OU2 landfills. (TX 4691 at -042.)

186. In 2009, the United States sued GP under §§ 106, 107 and 113 to recover response costs it had incurred in connection with the Site. (TX 12345.)

187. As a result of this litigation, on September 30, 2009, GP entered into a Consent Decree for the Design and Implementation of Certain Response Actions at Operable Unit 2 (the “OU2 Consent Decree”) with EPA. (TX 2410.) The Consent Decree directed GP to complete the response action selected in the 2006 ROD for OU2 and to reimburse certain costs incurred by EPA. (*Id.*)

188. GP began work on the response action selected by the 2006 OU2 ROD in May 2011 and completed it in June 2014. (TX 11865.)

G. This Lawsuit

189. GP filed the present action against NCR and IP on December 3, 2010. (Compl., dated Dec. 3, 2010 (Dkt. No. 1).) On June 24, 2011, GP filed an amended complaint, adding Weyerhaeuser as a defendant. (Am. Compl., dated June 24, 2011 (Dkt. No. 80).)

190. GP asserts a claim for contribution under CERCLA § 113(f) against each Defendant and a claim for cost recovery under CERCLA § 107(a) against each Defendant. (Am. Compl., dated June 24, 2011, ¶¶ 134-214.) GP requests (i) a judgment in its favor and against each of the three Defendants; (ii) an order directing each Defendant to pay its equitable percentage of past response costs under CERCLA §§ 113 and 107; and (iii) a declaratory judgment under § 113 ordering each Defendant to pay its equitable share of future response costs. (*Id.* at 38.)

191. Weyerhaeuser asserts counter claims and cross-claims against the other parties “for contribution or other recovery under CERCLA” if it is held liable for more than its fair share of response costs. (Weyerhaeuser Ans., dated Sept. 2, 2011 (Dkt. No. 105) at 57.)

192. IP asserts counterclaims and cross-claims against the other parties under CERCLA § 107 and § 113. (IP Ans., dated July 25, 2011 (Dkt. No. 91) at 88-89.)

193. NCR has asserted a series of defenses in this matter, including, among others, that (i) the Mill Parties have failed to state a claim because NCR did not arrange for the disposal or treatment of any hazardous substances at the Site; (ii) the claims against NCR are barred by the statute of limitations; (iii) the Mill Parties claims are subject to various causation based defenses, including, but not limited to, divisibility and equitable doctrines; and (iv) GP's claimed costs are unrecoverable because they are not response costs, are not consistent with the National Contingency Plan ("NCP"), or are subject to insurance offsets. (NCR Answer to GP (Dkt. No. 90), dated Jul. 25, 2011, at 53-54; NCR Answer to IP (Dkt. No. 100); NCR Answer to Weyerhaeuser (Dkt. No. 109); NCR's Second Supp. Resps. and Objs. to GP's First Phase II Interrogs., dated Oct. 7, 2014, at 10-13 TX 429.)

194. By agreement of the parties, the Court bifurcated the case into two phases. (Hr'g Tr. dated June 27, 2011, at 24.) Phase I addressed whether NCR and IP were liable under CERCLA § 107 for response costs at the Site. (Phase I PTO.) Weyerhaeuser stipulated that it is liable at the Site under CERCLA. (Stip. and Order, dated Feb. 8, 2013 (Dkt. No. 369).)

195. On September 26, 2013, the Court issued its Phase I Opinion and Order with respect to NCR's and IP's liability. (Phase I Op. at 2-3.) The Court found that "NCR is directly liable as an arranger under CERCLA, 42 U.S.C. § 9607(a)(3)" and that "IP is liable under CERCLA as an owner". (Phase I Op. at 2-3)

196. The Court's holding regarding NCR is based on the finding that "by a preponderance of the evidence that, by at least March of 1969, NCR knew CCP broke generated a toxic, hazardous by-product in normal recycling". (Phase I Op. at 17.)

II. Apportionment / Divisibility

197. Although the Court has found NCR liable as an arranger, no more than a small portion (2%) of the alleged harm can be apportioned to NCR.

198. An alleged harm is divisible or subject to apportionment where (i) it is theoretically capable of apportionment and (ii) there is a reasonable basis for apportionment. *See Burlington N. Santa Fe Ry. v. United States*, 556 U.S. 599, 614 (2009).

199. Here, the alleged harm is theoretically capable of apportionment and there is a reasonable basis for apportioning NCR's divisible share.

A. The Alleged Harm Is Theoretically Capable of Apportionment

200. Environmental harm is theoretically capable of apportionment where a party can show the extent to which it contributed to the alleged harm. *United States v. P.H. Glatfelter Co.*, 768 F.3d 662, 678 (7th Cir. 2014) ("[W]e think the harm would be theoretically capable of apportionment if NCR could show the extent to which it contributed to PCB concentrations in [the affected area].")

201. The alleged harm at the Site is theoretically capable of apportionment because NCR's contribution to the alleged harm is limited to: (i) PCB contamination arising from the recycling of CCP, (ii) recycled CCP broke and trim generated by NCR's affiliates (during the

period when NCR owned them), (iii) PCB contamination from CCP broke and trim for which there is evidence that NCR acted as an “arranger”, and (iv) PCB contamination caused by CCP recycled and PCB releases after March 1969, when the Court found that NCR had the intent necessary to be liable as an arranger (and certainly after 1966, when the Soren Jensen article was published).

202. PCBs contamination arising from CCP Recycling. Aroclor 1242 is the only PCB ever used in CCP. (TX 1626; Phase I PTO at 4, ¶ 9.) NCR cannot be responsible for PCB contamination caused by Aroclors other than 1242 that were released by sources other than the recycling of CCP.

203. Channels owned by NCR. Recycled CCP came from seven different channels: CCP broke from (i) ACPC, (ii) CPM, (iii) Mead, (iv) Nekoosa; CCP trim from (v) Systemedia and (vi) Independent Converters; and (vii) post-consumer sources of CCP. Of these channels, NCR can only be responsible as an arranger for CCP broke or trim that came from entities or channels that NCR owned, *i.e.*, ACPC, CPM, and Systemedia (“NCR’s affiliates”), and can only be said to have arranged for the disposal of CCP through their actions during the periods that NCR owned them. Prior to that time NCR had no ability to control their actions, and they did not themselves have the requisite intent for arranger liability.

203.1 ACPC was independent of NCR until NCR acquired it on September 30, 1970. (TX 3547 at -677.)

203.2 CPM was independent of NCR until NCR acquired it on July 28, 1969. (TX 3546 at -863.)

203.3 NCR owned Systemedia throughout the Production Period. (TX 1158 at -488.)

203.4 At all times, Mead and NCR have been separate corporations. (Phase I PTO at 6, ¶ 52.) Mead controlled how its CCP broke was gathered, baled, packed, shipped and sold. (Phase I PT at 6, ¶ 59.) NCR did not own or possess CCP broke produced by Mead. (Phase I PTO at 6, ¶¶ 57-58; NCR Phase I PFOF (Dkt. No. 422-1) ¶¶ 127-39.)

203.5 At all times, Nekoosa and NCR have been separate corporations. Nekoosa controlled how its CCP broke was gathered, baled, packed, shipped and sold. NCR did not own or possess CCP broke produced by Nekoosa.

203.6 NCR never owned or operated any Independent Converters. (Frazier R. (12/05/2014) at 29 (TX 4641).)

203.7 NCR did not sell or transact in post-consumer CCP. (Frazier 4/17/2015 Dep. Tr. at 42:2-9 (TX 189).)

204. Recycling of NCR-arranged CCP. NCR could only have caused PCB contamination from CCP broke and trim for which there is evidence that NCR acted as an “arranger”. NCR cannot be responsible for the cleanup of PCBs resulting from the recycling of

CCP that the Mill Parties cannot prove was “arranged” by NCR. The Mill Parties have alleged only minimal evidence that CCP recycled by the Kalamazoo Mills was arranged by NCR that corresponds to less than 1% of the CCP recycled at the Site.

204.1 The Mill Parties have not identified any evidence that CCP broke or trim from any of NCR’s affiliates was recycled at 9 of the 14 Kalamazoo Mills. (*See infra* ¶ 287.)

204.2 Regarding the Allied Mills (Bryant, Monarch, King, and Rex Mills), the Mill Parties point to alleged evidence that predates the time when NCR has been found to have had the knowledge the Court found necessary to hold it liable as an arranger. (*See infra* ¶ 288.)

205. Period when NCR could have been an arranger. NCR can only be responsible for PCB contamination arising from transactions in CCP broke and trim while NCR had the intent necessary to be liable as an arranger. Because the Court did not find that NCR or any of its affiliates had—and they did not have—the requisite intent to be liable as an arranger before March 1969, NCR cannot be responsible for PCB contamination arising from CCP recycling or PCBs discharged at the Site prior to 1969. (Phase I Op. at 15-21.)

205.1 At the time NCR selected Aroclor 1242 for use in its CCP emulsion, studies did not suggest PCBs could be an environmental hazard. (*See infra* § III.E(1).)

205.2 Prior to and after selecting Aroclor 1242, NCR and others conducted toxicity tests, which showed that Aroclor 1242 was safe for use in CCP. (*See infra* § III.E(2).)

205.3 During the Production Period, NCR was not aware of any studies indicating that Aroclor 1242 could be an environmental hazard. (*See infra* § III.E(3).)

205.4 No scientific articles published during the Production Period reported finding Aroclor 1242 in the environment. (*See infra* § III.E(4).)

205.5 During the Production Period, it was unknown whether low levels of PCBs detected in the environment constituted a health hazard. (*See infra* § III.E(5).)

205.6 During and after the Production Period, Monsanto assured its customers, the government, and the public that Aroclor 1242 was not an environmental hazard. (*See infra* § III.E(6).)

205.7 NCR ceased using Aroclor 1242 in April 1971, before it was found to be an environmental hazard. (*See infra* § III.E(7).)

205.8 The use of PCBs was not banned until after the Production Period. (*See infra* ¶ III.E(8).)

205.9 The properties and effects of DDT did not indicate that PCBs were environmentally harmful. (*See infra* § III.E(9).)

205.10 NCR did not conceal the fact that CCP contained PCBs. (*See infra* § III.E(10).)

206. In addition, the harm at the Site is capable of apportionment because it was not all the result of one cause. Specifically, no one Kalamazoo Mill by itself, nor any combined set of mills associated with any one party, (i) recycled all the CCP that was recycled at the Site (Scott R. (2/27/2015) at Ex. 1 (TX 2506)), (ii) discharged all the Aroclor 1242 released into the Site or the river specifically (Allen R. (2/27/2015) at App. C) (TX 2537)), or (iii) contaminated all the volume or area of river sediment and floodplain soil (Butler R. (7/21/2015) App. C1A, Table 1A (TX 171)).

B. There Is a Reasonable Basis to Apportion NCR's Share of the Alleged Harm

207. Environmental harm is theoretically capable of apportionment where a party can show the extent to which it contributed to the alleged harm. *United States v. P.H. Glatfelter Co.*, 768 F.3d 662, 678 (7th Cir. 2014). “[A] ‘reasonable basis for apportionment’ need not be mathematically precise, and may be based on the simplest of considerations,’ e.g., time and land areas.” *PCS Nitrogen Inc. v. Ashley II of Charleston LLC*, 714 F.3d 161, 183 (4th Cir. 2013) (quoting *Burlington N. Ry. Co. v. United States*, 556 U.S. 599, 617-18 (2009)). “Defendants’ burden may be met by showing that harm can be divided among them based on volumetric, chronological, or geographic considerations.” *United States Virgin Islands Dep’t of Planning and Natural Res. v. St. Croix Renaissance Group, LLLP*, No. 07-114, 2013 WL 5640720, at *3 (D.V.I. Oct. 16, 2013).

208. NCR’s contribution to the contamination at the Site can reasonably be apportioned as no more than 2% based on the combination of: (i) the amount of PCBs at the Site released from the recycling of CCP, (ii) the proportionate amount of CCP recycled by mills nationwide that was made up of CCP broke and trim generated by NCR’s affiliates (and during the period that NCR owned them), (iii) the amount of PCB contamination at the Site caused by CCP broke and trim for which there is evidence that NCR acted as an “arranger”, and (iv) the amount of PCB contamination caused at the Site after 1968 (and after 1966).

(1) PCBs Unrelated to the Recycling of CCP

209. NCR did not cause 25% of the PCB contamination at the Site made up of PCBs other than Aroclor 1242, the only PCB ever used in CCP. (TX 1626; Phase I PTO, at 4, ¶ 9.)

210. The Site contains PCBs released by various entities and industries unrelated to CCP, including Aroclor 1254, which was used in various oils in heavy manufacturing operations and as dielectric fluids in electrical equipment, and Aroclor 1260, which was used in paints, adhesives, coatings, plasticizers, and as dielectric fluids in capacitors and transformers. (TX 11387 at -631.)

211. Aroclor 1254 and 1260 make up 25% of the PCBs in the sediments in the Kalamazoo River between Morrow Lake and Allegan Dam and in the former impoundment areas. (*KRSG v. Eaton Corp.*, 258 F. Supp. 2d 736, 741 (W.D. Mich. 2002); TX 11387 at -646.)

(2) Recycled CCP from NCR's Affiliates

212. NCR cannot have caused any PCB contamination except as arising from releases of Aroclor 1242 from recycled CCP trim and broke generated by NCR's affiliates, *i.e.*, ACPC, CPM, and Systemedia, and during the periods when NCR owned them.

213. No more than 14.5% of CCP recycled anywhere in the nation was made up of CCP broke or trim generated by NCR's affiliates. (Wittenbrink R. (2/27/2015) App. B, Ex. D & Table 7 (TX 2484).)

213.1 Approximately 538.53 million lbs of all CCP manufactured was recycled in some form by recycling mills nationwide. (Wittenbrink R. (2/27/2015) App. B, Ex. D (TX 2484).)

213.2 Approximately 10.9% (58.65 million lbs) of CCP recycled by recycling mills nationwide was made up of CCP broke generated by ACPC. (Wittenbrink R. (2/27/2015) App. B, Ex. A (TX 12253); TX 1149 at -613 (production data – 1954-1956; 1957-1971 calculated as difference between total CCP production and production by all other Coating Companies); TX 1305 at -054 (approximately 7% of ACPC production generated as broke); TX 5507 -413 (observing that EPA study assumed 98% recovery rate for converter trim).)

213.3 Approximately 0.2% (1.18 million lbs) of CCP recycled by recycling mills nationwide was made up of CCP broke generated by CPM. (Wittenbrink R. (2/27/2015) App. B, Ex. A (TX 12253) (TX 2484); TX 1595 at -723-24 (CPM emulsion purchases – Jan. 1970-Oct. 1970); TX 1160 at 987-88 (CPM emulsion purchases - Jan. 1971-Apr. 1971); TX 4920 (CPM emulsion purchases – Jan. 1970-Nov. 1970); TX 5492 at -054; (assume 7% of broke rate); TX 5507 at -413 (observing that EPA study assumed 98% recovery rate for converter trim).)

213.4 Approximately 3.4% (18.09 million lbs) of CCP recycled by recycling mills nationwide was made up of CCP trim generated by Systemedia. (Wittenbrink R. (12/5/2014) ¶ 19 (TX 2482); TX 1158 at -489; McIntosh 3/15/2012 Dep. Tr. at 30:4-17, 132:1-19 (TX 49) (observing Systemedia converting operations more efficient than non-NCR converters (15% trim rate applied); TX 5507 -413 (observing that EPA study assumed 98% recovery rate for converter trim).)

214. No more than 4.2% of CCP recycled anywhere in the nation was made up CCP broke or trim generated by NCR's affiliates during the period that NCR owned them. (Wittenbrink R. (2/27/2015), App. B, Ex. D & Table 7 (TX 2484); TX 12285 (ACPC acquired by NCR on Sept. 30, 1970; TX 12284 (CPM acquired by NCR on July 28, 1969).)

(3) NCR-Arranged CCP

215. NCR could not have caused PCB contamination at the Site resulting from recycled CCP that was not the subject of an NCR-arranged transaction. The evidence that NCR-arranged CCP was recycled by the Kalamazoo Mills is minimal. (GP's Supp. Ans. and Objs. to NCR's Interrogs. to the Other Parties, dated Jul. 24, 2014, Interrog. No. 5 (TX 12412)

(incorporating by reference GP's Phase I PFOF and GP's Ans. and Objs. to NCR's First Set of Interrogs., dated Apr. 11, 2012, Resp. to Interrog. No. 1); Weyerhaeuser's Second Supp. Ans. and Objs. to NCR's Interrogs. to the Other Parties., dated May 29, 2015, Interrog. No. 5 (TX 12441); IP's Further Supp. and Restated Resps. to Certain of NCR's Interrogs. to the Other Parties, dated Dec. 2, 2014, Interrog. No. 5 (TX 12440); (incorporating evidence presented in Phase I and GP's Supp. Ans. and Objs. to NCR's Interrogs. to the Other Parties, dated Jul. 24, 2014, Response to Interrog. No. 6).)

216. Very little of the CCP broke and trim generated by NCR's affiliates—ACPC, CPM, and Sytemedia—was recycled at the Site.

216.1 “Most, if not all, NCR Paper broke produced by [ACPC] was likely deinked and used in the Fox Valley [Wisconsin]” because “the total amount of NCR paper produced would have required only about 1% of the deinking capacity in the [Fox] Valley”, “strong local [Wisconsin] demand”, and “shipping costs would have made it less economically attractive to ship material to distant mills”. (TX 3112 at -528.)

216.2 The Mill Parties contend that only three of Systemedia's nationwide facilities sent CCP trim to the Kalamazoo Mills, as opposed to recycling mills located elsewhere. (*See infra* ¶¶ 278-279.) Specifically, the CCP trim recycled that was generated by the three Systemedia facilities identified by the Mill Parties amounts to no more than approximately 1.4% (approximately 7.49 million lbs) of all CCP recycled nationwide, or 0.6% of all CCP ever made. (Wittenbrink R. (2/27/2015) App. B, Table 6; Table 9, Ex. G (TX 2484).)

217. The alleged direct evidence cited by the Mill Parties of CCP broke and trim for which there is evidence that NCR acted as an “arranger” corresponds to less than 1% (approximately 314,000 lbs) of CCP recycled by the Kalamazoo Mills. (*See infra* § III.C(4).)

217.1 The Mill Parties have not identified any evidence that CCP broke or trim from any of NCR's affiliates was recycled at 9 of the 14 Kalamazoo Mills. (*See infra* ¶ 287.)

217.2 The amount of CCP broke or trim reflected by the Phase I testimony of Mr. Edgerton, a former truck driver employed by GP, corresponds to no more than two truckloads of CCP delivered to the KPC Mill. (Edgerton 12/2/2011 Dep. Tr. at 24:20-25:10; 38:5-39:2 (TX 40); Edgerton 9/12/2012 Dep. Tr. at 152:7-153:19 (TX 12).) Assuming a truckload hauled approximately 41,000 lbs. of paper, Mr. Edgerton's testimony corresponds to approximately 82,000 lbs. or 0.25% of all CCP recycled by the Kalamazoo Mills, 0.015% of all CCP recycled nationwide, and 0.0061% of all 1.3 billion pounds of CCP manufactured. (Wittenbrink R. (2/27/2015) App. B, Ex. A, Ex. D (TX 2484); Scott R. (2/27/2015) Ex. 1 (TX 2508); Hunter 11/16/2011 Dep. Tr. at 18:10-15 (TX 39) (testimony that backhauled trucks carried between 37,000 and 45,000 lbs of paper).)

217.3 The amount of CCP broke or trim reflected by the three 1968 entries cited in the Court's Phase I Opinion (Phase I Op. at 21) in the 16,000-entry ledger of waste

paper shipments received by GP's KPC Mill (TX 1833 at -470, -494, -524) corresponds to approximately 232,000 pounds of CCP, and make up less than 1% of all CCP recycled by the Kalamazoo Mills. (Wittenbrink R. (2/27/2015) App. B, Ex. A, Ex. D (TX 2484); Scott R. (2/27/2015) Ex. 1 (TX 2508).) For the purposes of analysis, it is assumed that the entries reflect shipments from NCR's affiliates. The ledger indicates that the entries were received by the KPC Mill from a paper broker, but do not indicate whether the subject paper was CCP broke or trim received from one of NCR's affiliates. (TX 1833 at -470, -494, -524.)

217.4 The amount of CCP broke and trim for which there is evidence that NCR acted as an "arranger" corresponding to the purported May 19, 1965, Heinritz letter that describes "limited quantities" of coated back CCP being "used" in the past by Allied in Kalamazoo, Michigan is *de minimis*. (TX 1240.) The document provides no quantification of the "limited quantities" of broke used, and offers no basis to infer any more than a *de minimis* amount.

217.5 The Mill Parties have not adduced any additional evidence in Phase II discovery reflecting transactions (direct or indirect) in CCP broke and trim between any of NCR's affiliates and the Kalamazoo Mills.

(4) PCB Contamination Caused After 1968 (or after 1966)

218. NCR also could not have caused any harm at the Site arising from PCB discharges prior to 1969 because NCR lacked the intent required to be an arranger before 1969.

219. By 1969 (and by 1967), a significant amount of the Kalamazoo Mills ceased their deinking operations, which were responsible for recycling the vast majority of the CCP recycled at the Site. The Monarch Mill ceased deinking operations in 1957. (*See supra* ¶ 94.) The Plainwell Mill ceased deinking operations in 1963. (*See supra* ¶ 87.) The King Mill ceased deinking operations in 1965. (*See supra* ¶ 100.) The KPC Mill ceased a significant portion of its deinking operations in 1967. (*See supra* ¶ 35.)

220. By the same time, many of the Kalamazoo Mills began using secondary wastewater treatment, resulting in a substantial decrease of PCBs released into the Kalamazoo River and Portage Creek. The KPC, Sutherland, Hawthorne, and KVP Mills began directing its wastewater effluent to the POTW in 1967. (*See supra* ¶¶ 38, 44, 56, 62.) The Bryant Mill began directing their wastewater effluent to the POTW in 1969. (*See supra* ¶ 68.)

221. Only 16.44% of the CCP recycled by the Kalamazoo Mills was recycled after January 1, 1969 (29.71% recycled after January 1, 1966). (Addendum B; Scott R. (2/27/2015) Ex. 1 (TX 2508).)

221.1 No more than 4.6% of all recycled CCP nationwide was made up of CCP broke or trim generated by ACPC, CPM, or Systemedia after January 1, 1969 (8.05% after January 1, 1967). (Wittenbrink R. (2/27/2015) App. B, Table 5 (TX 5739) (TX 2484).)

222. Only 15.91% of the Aroclor 1242 released by the Kalamazoo Mills into the Site was discharged after January 1, 1969 (28% after January 1, 1967). (Addendum C; Allen R. (2/27/2015) App. C (TX 12244).)

223. Only 4.49% of the Aroclor 1242 released by the Kalamazoo Mills into the *Kalamazoo River and Portage Creek* was discharged after January 1, 1969 (10.61% after January 1, 1967). (Addendum C; Allen R. (2/27/2015) App. C (TX 12244).)

224. Geochronological dating of PCBs presently in the Kalamazoo River demonstrates that no more than 13% (and likely less) of the PCBs (not only Aroclor 1242) were deposited in the river after January 1, 1969 (24% after January 1, 1967). (Reible R. (12/5/2014) at 30-31 (TX 2545).)

225. On a work-area-by-work-area basis, NCR's divisible share of the Kalamazoo River cleanup (OU5) is no more than the following percentages of contaminated volume and area (and associated overburden), respectively, that may be dredged or capped and that is contaminated in excess of anticipated remediation thresholds by Aroclor 1242 discharged after January 1, 1969 (or after January 1, 1967):

After January 1, 1969

(Based on a river model simulation of PCB releases estimated by Dr. Allen.)
(Addendum C)

OU5 Work Area	% of Contamination Volume after Jan. 1 1969 (Assumed dredging remedy)	% of Contamination Area after Jan. 1, 1969 (Assumed capping remedy)
Work Area 1A	2.52%	2.52%
Work Area 1B	2.71%	3.55%
Work Area 2	3.46%	3.62%
Work Area 3	3.29%	3.02%
Work Area 4	3.43%	3.72%
Work Area 5	3.48%	3.33%
Work Area 6	5.79%	7.49%
Work Area 7	3.28%	3.44%

(Butler R. (7/21/2015) App. C1A, Tables 2 & 2A (TX 171).)

After January 1, 1967

(Based on a river model simulation of PCB releases estimated by Dr. Allen
(Addendum C).)

OU5 Work Area	% of Contamination Volume after Jan. 1, 1967 (Assumed dredging remedy)	% of Contamination Area after Jan. 1, 1967 (Assumed capping remedy)
Work Area 1A	12.96%	12.96%
Work Area 1B	7.49%	8.86%
Work Area 2	8.08%	8.48%
Work Area 3	8.42%	8.00%
Work Area 4	8.77%	8.98%
Work Area 5	8.62%	7.91%
Work Area 6	10.5%	12.36%
Work Area 7	8.58%	8.08%

(Butler R. (7/21/2015) App. C1B, Tables 2 & 2A (TX 171).)

After January 1, 1969

(Based on a river model simulation of an annualization of PCB releases estimated
by Dr. Wolfe.)

OU5 Work Area	% of Contamination Volume after Jan. 1 1969 (Assumed dredging remedy)	% of Contamination Area after Jan. 1, 1969 (Assumed capping remedy)
Work Area 1A	13.14%	13.14%
Work Area 1B	11.12%	11.73%
Work Area 2	10.91%	12.23%
Work Area 3	9.82%	9.98%
Work Area 4	9.69%	10.48%
Work Area 5	12.05%	12.96%
Work Area 6	17.34%	22.03%
Work Area 7	—	—

(Butler R. (7/21/2015) App. H2, Tables 2 & 2A (TX 171).)

After January 1, 1967

(Based on a river model simulation of an annualization of PCB releases estimated by Dr. Wolfe.)

OU5 Work Area	% of Contamination Volume after Jan. 1, 1967 (Assumed dredging remedy)	% of Contamination Area after Jan. 1, 1967 (Assumed capping remedy)
Work Area 1A	17.83%	17.83%
Work Area 1B	16.07%	17.3%
Work Area 2	16.04%	18.01%
Work Area 3	14.19%	14.25%
Work Area 4	14.08%	15.58%
Work Area 5	16.35%	17.28%
Work Area 6	23%	27.51%
Work Area 7	—	—

(Butler R. (7/21/2015) App. H3, Tables 2 & 2A (TX 171).)

226. The only alleged evidence of actual transactions in CCP after 1968 between one of NCR's affiliates and any of the Kalamazoo Mills is limited to two truckloads delivered to the KPC Mill. (Edgerton 12/2/2011 Dep. Tr. at 24:20-25:10; 38:5-39:2 (TX 40); Edgerton 9/12/2012 Dep. Tr. at 152:7-153:19 (TX 12).) This evidence corresponds to less than 1% (approximately 82,000 lbs) of CCP recycled by the Kalamazoo Mills. (*See infra* § III.C(4) (setting forth Mill Party allegations).)

226.1 Assuming a truckload hauled approximately 41,000 lbs. of paper, the alleged evidence from Mr. Edgerton that two truckloads of CCP broke generated by ACPC were recycled by KPC amounts to 82,000 lbs or 0.25% of all CCP recycled by the Kalamazoo Mills, 0.015% of all CCP recycled nationwide, and 0.0061% of all 1.3 billion pounds of CCP manufactured nationwide. (Wittenbrink R. (2/27/2015) App. B, Ex. A, Ex. D, Ex. D (TX 2484); Scott R. (2/27/2015) Ex. 1 (TX[●]); TX-39 at 18:10-15 (testimony that backhauled trucks carried between 37,000 and 45,000 lbs of paper) (TX 39).)

226.2 The alleged evidence reflected in the KPC Mill's ledger of wastepaper shipments relates to shipments of CCP for recycling in 1968. (TX 1833 at -470, -494, -524.)

226.3 The alleged evidence reflected in the Heinritz letter relates to "limited quantities" of CCP broke prior to May 1965. (TX 1240.)

III. Equitable Allocation

227. In allocating response costs, courts consider a variety of equitable factors including: "(1) the ability of the parties to demonstrate that their contribution to a discharge, release or disposal of a hazardous waste can be distinguished; (2) the amount of the hazardous waste involved; (3) the degree of toxicity of the hazardous waste involved; (4) the degree of involvement by the parties in the generation, transportation, treatment, storage, or disposal of the

hazardous waste; (5) the degree of care exercised by the parties with respect to the hazardous waste concerned, taking into account the characteristics of such hazardous waste; and (6) the degree of cooperation by the parties with the Federal, State or local officials to prevent any harm to the public health or environment”. *Centerior Serv. Co. v. Acme Scrap Iron & Metal*, 153 F.3d 344, 354 (6th Cir. 1998) (abrogated on other grounds); *see also United States v. Davis*, 31 F. Supp. 2d 45, 63 (D.R.I. 1998) (noting “critical” equitable factors include (1) [t]he extent to which cleanup costs are attributable to wastes for which a party is responsible (2) [t]he party’s level of culpability, (3) [t]he degree to which the party benefitted from disposal of the waste, and (4) [t]he party’s ability to pay its share of the cost”).

228. No more than a small share of any response costs at the Site should be allocated to NCR because, among other things, (i) NCR owned no facilities and never discharged any PCBs at the Site, (ii) NCR’s arranger liability is limited to the period after January 1969 (and certainly after January 1967), (iii) NCR could not have arranged for the disposal of any more than a small amount of PCBs found at the Site (before or after 1969), (iv) the Kalamazoo-area mills, which were mostly owned and operated by the Mill Parties, discharged most of the PCBs at the Site, (v) NCR manufactured CCP, but did not act with culpable intent, (vi) while the Kalamazoo mills may not have known that the Aroclor 1242 in CCP presented a risk to the environment, they knowingly polluted the Kalamazoo River, and (vii) other factors suggest the Mill Parties bear primary responsibility.

A. NCR Is Liable Only as an “Arranger”

229. NCR’s liability is limited to that of an “arranger” because (i) NCR owned no facilities and never discharged any PCBs at the Site, (ii) the Court did not accept GP’s facilitator theory, and there is no basis to do so, (iii) there is no basis for challenging NCR’s sales of CCP emulsion or finished CCP products as arrangements to dispose of hazardous substances.

(1) NCR Owned No Facilities and Never Discharged Any PCBs at the Site

230. NCR was never “an owner and operator of a vessel or a facility . . . from which there is a release, or a threatened release” under 28 U.S.C. § 9607(a)(1). (Phase I PTO at 3, ¶ 1; GP Ans. and Objs. to NCR’s Second Set of Phase II Reqs. for Admission, dated Jul. 31, 2014, Resp. to Req. No. 12 (TX 399) (“[GP] admits, for purposes of this litigation only, that NCR is not liable for response costs at the Site under 42 U.S.C. §§ 9607(a)(1), (a)(2) or (a)(4)”)).

231. NCR is not “a person who at the time of disposal of any hazardous substance owned or operated any facility at which such hazardous substances were disposed of . . . [and] from which there is a release, or a threatened release” under 28 U.S.C. § 9607(a)(2). (GP Ans. and Objs. to NCR’s Second Set of Phase II Reqs. for Admission, dated Jul. 31, 2014, Resp. to Req. No. 12 (TX 399) (“[GP] admits, for purposes of this litigation only, that NCR is not liable for response costs at the Site under 42 U.S.C. §§ 9607(a)(1), (a)(2) or (a)(4)”)).

232. NCR is not a “person who accepts or accepted any hazardous substances for transport to disposal or treatment facilities, incineration vessels or sites selected by such person, from which there is a release, or a threatened release” under 28 U.S.C. § 9607(a)(4). (GP Ans. and Objs. to NCR’s Second Set of Phase II Reqs. for Admission, dated Jul. 31, 2014, Resp. to

Req. No. 12 (TX 399) (“[GP] admits, for purposes of this litigation only, that NCR is not liable for response costs at the Site under 42 U.S.C. §§ 9607(a)(1), (a)(2) or (a)(4)”.)

233. NCR’s liability at the Site is limited to that of an “arranger”. (Phase I Opinion at 3.)

(2) The Court Did Not Accept GP’s Facilitator Theory, and There Was No Basis To Do So

234. During Phase I, GP (but not IP or Weyerhaeuser) argued that NCR should be liable because it participated in a “multi-party production plan for NCR paper that included “outsourced coating of NCR Paper, along with cost recovery by the coaters through the sale of NCR Broke for recycling”. (GP Phase I Post-trial Br. at 33 (Dkt. No. 420).) The Court did not adopt GP’s purported theory of liability. (Phase I Opinion.)

235. In any event, there is no basis to apply a purported *Aceto* theory of liability in this case.

236. NCR did not *own* the CCP broke produced by the Coating Companies.

236.1 The parties have stipulated that NCR did not own the broke produced by ACPC, CPM or Mead. (Phase I PTO ¶¶ 31, 44, 57.) NCR also did not own the CCP broke produced by Nekoosa.

236.2 GP’s expert, Dr. Dolan, admitted that “all of the broke at the coating companies was owned by the coating company and not NCR”. (Dolan, Phase I Tr. at 844:10-14.)

236.3 GP’s expert, Dr. Kittrell, admitted that he had no knowledge of NCR ever taking legal title to the broke of any of the Coating Companies. (Kittrell, Phase I Tr. at 505:7-9.)

237. NCR did not *possess* the CCP broke produced by the Coating Companies.

237.1 The parties have stipulated that NCR did not possess broke produced by ACPC, CPM or Mead. (Phase I PTO ¶¶ 32, 44, 58.)

237.2 Dr. Kittrell admitted that he knew of “no evidence that NCR took physical possession of the broke of any of the coating companies at any point in the process”. (Kittrell Phase I Tr. at 505:2-6.)

238. NCR did not exercise any control whatsoever over the Coating Companies’ CCP broke.

238.1 The parties have stipulated that how broke was gathered, baled, packed, shipped and sold was within the control of the Coating Companies. (Phase I PTO ¶ 59.)

238.2 Mr. Schumaker testified that there were never any discussions with NCR about broke because NCR “had nothing to do with” ACPC’s broke. (Schumaker 11/02/2011 Dep. Tr. at 25:12-17 (TX 11).)

238.3 Daniel McIntosh, an NCR technical services representative who worked with ACPC and Mead (McIntosh 03/15/2012 Dep. Tr. at 19:3-21 (TX 49)) testified that NCR did not “exercise any type of control whatsoever” over Mead’s CCP broke. (*Id.* at 134:1-7, 135:14-17.)

238.4 Former Mead employee Robert Feters testified that he was not aware of any instances in which NCR exercised any control over how Mead baled, packed, shipped or sold its broke or over what Mead did with its broke. (Feters 03/27/2012 Dep. Tr. at 32:7-33:5 (TX 53).)

238.5 GP’s expert, Dr. Dolan, admitted that “broke that was generated by either Appleton or by Combined Locks or by Mead was the ball game of the coating companies and not NCR’s ball game”. (Dolan, Phase I Tr. at 844:24-845:2.)

238.6 Dr. Dolan agreed that “in terms of the broke, that was basically the coating company’s ball game rather than a ball game that NCR had anything do with”. (Dolan, Phase I Tr. at 845:3-7.)

238.7 Dr. Dolan admitted that “Mead, Appleton, and Combined Locks . . . had the degrees of freedom to dispose of their broke as they wished.” (Dolan, Phase I Tr. at 845:8-13.)

238.8 Dr. Dolan admitted that “with respect to collecting it and sorting it, baling it, dealing with brokers, making the decisions of selling it, that was all Appleton Coated and Mead or Combined Locks employees and not NCR”. (Dolan, Phase I Tr. at 844:15-19.)

238.9 Dr. Dolan admitted that “all of the money from the broke sales always went to the broke seller, Appleton Coated, Mead, or Combined Locks, and never to NCR”. (Dolan, Phase I Tr. at 844:20-23.)

238.10 Dr. Kittrell admitted that he was aware of “no NCR specifications regarding the disposal of broke”. (Kittrell, Phase I Tr. at 505:10-13.)

238.11 Dr. Kittrell admitted that NCR was not “involved in any way in the price negotiations by any of the coaters in their sale of broke to brokers” (Kittrell, Phase I Tr. at 505:18-21) and that NCR did not specify the price of broke (Kittrell, Phase I Tr. at 505:22-506:2).

238.12 Dr. Kittrell admitted that NCR did not have anything to do with the way in which the Coating Companies accounted for the proceeds from the sale of broke on their own books and records. (Kittrell, Phase I Tr. at 506:7 10.)

238.13 The Coating Companies did not share revenue generated from the sale of broke with NCR (McIntosh 03/15/2012 Dep. Tr. at 135:20-22 (TX 49); Phase I PTO ¶ 60), nor did they report this revenue to NCR (Fetters 03/27/2012 Dep. Tr. at 33:10-13 (TX 53).)

238.14 NCR never exercised any influence on the Coating Companies' decision of where or to whom to sell CCP broke. (McIntosh 03/15/2012 Dep. Tr. at 136:1-12 (TX 49).)

239. NCR was engaged in an arm's-length, supplier/customer relationship with each of the Coating Companies.

239.1 The Coating Companies each had a "supplier/customer relationship" with NCR. (Hietpas, Phase I Tr. at 967:19-25.)

239.2 Mr. Schumaker testified that ACPC had a "business relationship" with NCR by which ACPC "bought capsules from NCR, coated the paper, and sold it back to NCR, who subsequently sold it to the forms printers". (Schumaker 11/02/2011 Dep. Tr., at 13:17-20 (TX 11).)

239.3 The relationship between NCR and Mead was one of supplier/customer and customer/supplier. (Fetters 03/27/2012 Dep. Tr. at 45:25-46:5 (TX 53); McIntosh 03/15/2012 Dep. Tr. at 62:5-63:7 (TX 49).)

239.4 Mr. Hietpas, an accountant for ACPC, testified that everything that the Coating Companies purchased from NCR was purchased at arm's length. (Hietpas, Phase I Tr. at 972:20-24.)

239.5 Mr. Hietpas testified that the Coating Companies treated NCR like any other vendor; when they needed more emulsion, they ordered it; ACPC bought emulsion in the same way as any other raw materials. (Hietpas, Phase I Tr. at 968:23-969:11.)

239.6 The Coating Companies treated NCR no differently from any other customer. (Hietpas, Phase I Tr. at 974:1-4.)

240. NCR did not control the production rate of CCP.

240.1 No output contracts existed between NCR and any of the Coating Companies. (Kittrell, Phase I Tr. at 504:21-505:1.)

240.2 Dr. Kittrell admitted that he saw nothing in the record, other than references to regular commercial purchase orders, to support his allegation that NCR dictated the rate of production of CCP by the Coating companies. (Kittrell, Phase I Tr. at 471:13-22.)

241. The Coating Companies' ability to use CCP emulsion efficiently inured to their financial benefit, not NCR's.

241.1 Mr. Schumaker testified that ACPC tried to be “as efficient as possible” with the emulsion because ACPC’s efficiency or inefficiency with the emulsion would have a direct impact on ACPC’s profitability. (Schumaker 11/02/2011 Dep. Tr. at 28:17-29:10 (TX 11).)

241.2 Mr. Hietpas, also testified that “[t]he better utilization [ACPC] had of the emulsion, the more profitable it was for Appleton Papers” and that they continually worked to improve efficiency. (Hietpas, Phase I Tr. at 973:8-13.)

241.3 Like ACPC, Mead tried to “use as little emulsion as possible” because it directly affected Mead’s bottom line. (Montgomery 03/26/2012 Dep. Tr. at 21:9-24 (TX 52); Fetters 03/27/2012 Dep. Tr. at 19:15-25, 20:12-22 (TX 53).)

241.4 Dr. Dolan agreed that “if the coaters were efficient in coating and converting the emulsion in the products, that would enure [sic] to the coater’s financial benefit”. (Dolan, Phase I Tr. at 843:17-23.)

241.5 Dr. Dolan recalled references in the record to coating companies treating the emulsion “like gold”. (Dolan, Phase I Tr. at 843:24-844:9; *see also* Fetters 03/27/2012 Dep. Tr. at 18:13-15 (TX 53).)

242. The Coating Companies, not NCR, bore the risk of loss for emulsion once it arrived at the Coating Companies’ facilities.

242.1 Mr. Hietpas testified that “once [emulsion] was unloaded from the truck into one of our tanks” it belonged to ACPC and ACPC bore the risk of in the event that there was “a spill or a fire or some other issue at ACPC”. (Hietpas, Phase I Tr. at 972:25-973:7.)

242.2 Mr. Fetters testified that Mead bore the risk of loss for emulsion once the emulsion arrived at Mead’s plant. (Fetters 03/27/2012 Dep. Tr. at 22:3-6 (TX 53).)

242.3 NCR’s accounting expert Robert Rock testified that the Coating Companies bore the risk of loss of emulsion once they purchased it from NCR. (Rock, Phase I Tr. at 1040:23-1042:9.)

243. NCR required that CCP meet its product specifications, but did not dictate the process the Coating Companies used to make CCP.

243.1 ACPC’s Mr. Hietpas testified that while NCR had product specifications for finished carbonless paper, NCR did not dictate how ACPC “went about producing that paper”. (Hietpas, Phase I Tr. at 974:8-21.)

243.2 As long as the Coating Companies met product specifications, “that’s all that mattered”. (Fetters 03/27/2012 Dep. Tr. at 110:10-23 (TX 53).)

243.3 Mr. Montgomery did not recall Mead using process specifications at all when making NCR Paper. (Montgomery 03/26/2012 Dep. Tr. at 46:13-17 (TX 52).)

243.4 NCR's expert, Mr. Rock, testified that the kind of product specifications used in the manufacture of CCP were no different from those used in any manufacturing relationship. (Rock, Phase I Tr. at 1030:17-1031:8.)

243.5 Reporting on a visit to NCR, C.R.G. Maynard of Wiggins Teape stated that "process specifications [were] not rigid in any way and N.C.R. . . . [gave] the U.S. mills as much latitude as possible to run the coating how they want to". (TX 1185 at -354.)

243.6 The Coating Companies did not have to get NCR's approval in order to deviate from NCR process specifications. (Schumaker 11/02/2011 Dep. Tr. at 79:22-24 (TX 11); Fetters 03/27/2012 Dep. Tr. at 109:24-110:9 (TX 53).)

243.7 Specifications for the production of CCP "were not in any way monitored or policed". (McIntosh 03/15/2012 Dep. Tr. at 67:20-68:19 (TX 49).)

243.8 NCR did not tell the Coating Companies where to buy raw materials. (Hietpas, Phase I Tr. at 974:8-21; Montgomery 03/26/2012 Dep. Tr. at 19:9-14 (TX 52).)

243.9 Dr. Dolan agreed that "it was smart for NCR to let Appleton and Mead exercise their coating expertise when the paper got made, because they were the ones who had the experience and not NCR". (Dolan, Phase I Tr. at 838:14-20.)

244. NCR did not provide CCP emulsion to the Coating Companies on consignment.

244.1 ACPC's cost accountant, Mr. Hietpas, testified that ACPC never treated purchases of emulsion as a consignment. (Hietpas, Phase I Tr. at 972:7-19.)

244.2 Mr. Hietpas "violently disagree[d]" with the proposition that the Coating Companies received any NCR emulsion on consignment. (Hietpas, Phase I Tr. at 507:14-23.) Mr. Hietpas testified that accounting for emulsion transactions on a consignment basis would have been an "accounting nightmare". (Hietpas, Phase I Tr. at 507:14-23)

244.3 Rather, the Coating Companies *purchased* emulsion from NCR, and *sold* finished CCP to NCR. (Schumaker 11/02/2011 Dep. Tr. at 68:19-69:1 (TX 11); Hietpas, Phase I Tr. at 968:10-12; Montgomery 03/26/2012 Dep. Tr. at 16:2-5 (TX 52); Fetters 03/27/2012 Dep. Tr. at 18:24-19:2, 19:10-13 (TX 53).)

244.4 The Coating Companies owned both the raw materials for making CCP and the finished product. (Schumaker 11/02/2011 Dep. Tr. at 106:6-22 (TX 11).)

244.5 GP's Dr. Dolan admitted that emulsion was treated no different than other raw materials like base paper or starch on the balance sheets of the Coating Companies. (Dolan, Phase I Tr. at 835:2-21.)

244.6 Dr. Dolan “had no problem” saying that as “as a business matter” the transfer of emulsion from NCR to the Coating Companies was a sale. (Dolan, Phase I Tr. at 836:4-7.)

244.7 Dr. Dolan agreed that “[f]or the emulsion or the base paper or the starch, or whatever else they had to buy”, the Coating Companies “would buy it, pay for it, [and] list it as an asset on their balance sheet”. (Dolan, Phase I Tr. at 835:16-21.)

244.8 Robert Rock, NCR’s accounting expert, offered unchallenged testimony, based on his 35 years of experience as a certified public accountant (Rock, Phase I Tr. at 1021:26-1027:1), that the transactions for CCP emulsion were purchases/sales, not consignments (*id.* at 1026:21-1027:1). Based on his review of ACPC balance sheets and witness testimony, Mr. Rock concluded that the Coating Companies took title to NCR emulsion and that emulsion was not provided to the Coating Companies on consignment. (Rock, Phase I Tr. at 1030:17-1031:8), Mr. Rock testified that Coating Companies treated emulsion as an asset on their balance sheets, which would have been unheard of in a consignment context. (Rock, Phase I Tr. at 1042:13-1043:1.)

244.9 Dr. Dolan agreed that when NCR sold emulsion to the Coating Companies, “NCR was providing them with a new, patented, innovative, and useful product”. (Dolan, Phase I Tr. at 836:15-19.)

(3) NCR’s Sales of CCP Emulsion or Finished CCP Products Do Not Give Rise to CERCLA Liability

245. GP (not but IP or Weyerhaeuser) has argued that NCR should be liable as an arranger for the sale of CCP emulsion to the Coating Companies. (GP Phase I Post-Trial Br. at 34.)

246. NCR’s sales of CCP sheets and rolls to Independent Converters and NCR’s transfer of CCP sheets and rolls to Systemedia were sales/transfers of a useful product and thus cannot give rise to liability. (Cornell R. (1/30/2015) ¶¶ 8-13.)

247. NCR’s sales/transfers of CCP sheets and rolls have all the hallmarks of a useful product, including that they were bought and sold in an active market, and were bought and sold for a positive price and were the basis for a profitable business. (NCR Phase I PFOF at 15.)

248. NCR considered CCP to be “a major business in its own right.” (TX 11736 at -338.)

249. CCP was in demand and was bought and sold in an active market with numerous buyers who purchased substantial quantities from NCR. NCR generated tens of millions of dollars in revenue on an annual basis from these sales. (TX 1157.)

249.1 In 1970, NCR’s paper business, which consisted of “primarily NCR Paper” generated \$113.9 million in sales worldwide, which increased about 6% more to \$120.4 million in 1971 and grew an additional 10% to \$132.1 million in 1972. (TX 11737 at -339, -389.)

249.2 In domestic sales alone, NCR generated \$47.2 million and \$54.4 million in 1968 and 1969, respectively, from sales of NCR Paper, and \$12.9 million and \$16.5 million, respectively, in sales of business forms incorporating NCR Paper. (TX 1157 at -721.)

249.3 NCR's ten largest Independent Converters of CCP each purchased between \$823,000 and \$5.6 million worth of product in 1968 and between \$749,000 and \$6.8 million in 1969. (TX 1157 at -723.)

250. CCP was widely accepted and used by consumers for a variety of applications. (TX 4710 at -304.)

250.1 The demand for CCP was so high that NCR had problems meeting production demands for CCP emulsion. (TX 4712 at -827.)

250.2 NCR had to open an additional capsule production facility to keep up with the increased demand. (TX 4712 at -827.)

251. Demand for CCP grew throughout the 1960s. (TX 2193 at -268.)

251.1 Demand was particularly high in the latter half of the decade. For example, NCR's paper business, which included CCP, grew by 18% in 1967, and NCR expected to double its volume by 1971. (TX 11612 at -554.)

252. NCR's substantial efforts to develop CCP and protect its related innovations indicate that NCR viewed CCP as a highly valuable product.

252.1 NCR obtained at least twelve patents related to CCP, issued in the period June 21, 1955, through July 15, 1969. (TX 1156 at -969-970.)

252.2 In total, NCR obtained "more than 150 U.S. and foreign patent awards" related to CCP. (TX 1038 at -254.)

253. CCP was bought and sold in an established market.

253.1 By 1970, several companies were well established as CCP manufacturers and sellers. (TX 5317 at -724.)

253.2 There were at least three bulk CCP competitors (*i.e.*, sellers of CCP rolls and sheets) (TX 5317 at -723), with more competitors attempting to enter the market (TX 1604).

254. NCR's sales of CCP emulsion (to Coating Companies), like sales of the actual CCP, were sales of a useful product and thus cannot give rise to liability.

255. CCP emulsion was a new and innovative product that was critical to CCP. (McIntosh 4/7/2009 Dep. Tr. at 146 (TX 82); TX 4732 at -507.)

255.1 Purchasers of CCP emulsion, such as ACPC, considered it to be a highly valuable product. (Grabow 3/28/2012 Dep. Tr. at 72:11-16 (TX 55).)

255.2 Once acquired by a coating company, CCP emulsion was handled with care and treated like “gold”. (Grabow 3/28/2012 Dep. Tr. at 70:8-9 (TX 55).)

255.3 CCP emulsion was the most expensive input needed to make CCP. (Grabow 3/28/2012 Dep. Tr. at 73:13-16 (TX 55).)

255.4 There is no evidence that NCR or any Coating Companies paid any one to discard CCP or CCP emulsion.

B. NCR’s Arranger Liability Is Limited to the Period after March 1969

256. NCR’s arranger liability is limited to the period after March, 1969, because (i) NCR’s sales of CCP broke and trim constituted sales of a useful product (except as otherwise ruled by the Court) and (ii) NCR lacked the requisite intent for liability before 1969.

(1) NCR’s Sales of CCP Broke and Trim Constituted Sales of Useful Products

257. The sales of CCP broke by Coating Companies and the sale of CCP trim by Independent Converters and Systemedia were sales of a useful product at least through 1968 and thus not subject to liability prior to 1969. (*See generally* Phase I Opinion (finding NCR liable as arranger at least as of March, 1969).)

258. During the Phase I trial, NCR presented considerable evidence that sales of CCP broke and trim were sales of a useful product and, by order of the Court, that record is part of the record of the Phase II trial and is incorporated herein by reference. (Am. Order Revising Case Schedule and Addressing Mots., dated Aug. 13, 2014 (Dkt. No. 542), ¶ 7.)

259. In particular, NCR presented evidence that: (i) CCP broke and trim were viewed as valuable products and sources of revenue for Coating Companies, Independent Converters and Systemedia; (ii) there was a well established market for CCP broke and trim; and (iii) CCP broke and trim were useful and valuable raw inputs for the paper mills. (*See* Addendum D.)

259.1 Coating Companies, Independent Converters and Systemedia treated CCP broke and trim as valuable products and sources of revenue. Among other things, internally they described CCP broke and trim as an “asset” (Schumaker 11/02/2011 Dep. Tr. at 11:18-21, 12:15-13:3, 18:12-22 (TX 11)); they had procedures for handling CCP broke and trim and preparing it for shipment to maximize the revenues they could receiving from selling those products (Phase I PTO ¶¶ 28, 42, 54); and sales of CCP broke and trim generated important positive cash flows for Coating Companies, Independent Converters and Systemedia (Phase I PTO ¶¶ 30, 56).

259.2 There was a well established market for CCP broke and trim. (PTO ¶ 84.) For example, there was a strong and constant demand from the paper companies (Strelow

Phase I Tr. at 929:12-15, 929:25-930:2) and prices fluctuated due to supply and demand (Dolan, Phase I Tr. 830:12-14).

259.3 CCP broke and trim were useful and valuable raw inputs for the paper mills. (Phase I PTO, at 8, ¶¶ 82, 87, 88.) Indeed, a steady supply of broke was the lifeblood of many recycling mills, including GP's KPC mill. (Hanson, Phase I Tr. at 540:1-3 (TX 54); Martin 08/30/2011 Dep. Tr. at 108:17-22 (TX 37).)

260. Although the Court found (in its Phase I decision) that certain of NCR's post-1968 sales of CCP broke and trim were not sales of a useful product (but rather arrangements of the disposal of hazardous waste), the same cannot be said of pre-1968 sales of CCP broke and trim by NCR or sales of CCP broke and trim by entities other than NCR.

(2) NCR Lacked the Requisite Knowledge For Liability Before 1969

261. The Court's knowledge findings (with which NCR respectfully disagrees and that NCR intends to appeal) do not pertain to the period before 1969 or to sales by entities other than NCR. (*See infra* § III. E.)

262. Prior to 1966, no studies were conducted on the effects of PCBs on the environment. (Williams R. (12/3/2014) at 29 (TX 2580).)

263. In December 1966, findings were published suggesting for the first time that some PCBs may persist in the environment. (TX 1459.)

263.1 The earliest NCR became aware of Dr. Jensen's findings was when Monsanto mailed a copy of a speech by Dr. Jensen to NCR in February 1967. (TX 1466.)

263.2 In the ensuing years, Monsanto told NCR and others that it was unclear whether what Dr. Jensen had allegedly discovered in the environment were actually Aroclors.

263.3 In Monsanto's cover letter enclosing the Jensen paper, Monsanto told NCR that it needed to resolve analytical issues with Dr. Jensen's study and questioned whether the quantities reported by Dr. Jensen could be meaningful from a toxicological standpoint. (*See* TX 1466.)

263.4 In response to Monsanto's letter, NCR requested that Monsanto check Dr. Jensen's procedures and asked for Monsanto's "conclusions and plan of approach to define more precisely the identification of the particular chlorinated compounds". (TX 1469.)

263.5 Monsanto product specialist Dr. Cumming Paton acted as a liaison to NCR during the Production Period. (Paton Dep. Tr. at 15:2-13 (TX 21).) Dr. Paton testified that it was unclear from Dr. Jensen's study whether he had discovered "a chlorinated benzene of some sort that would have been used as a pesticide . . . [or] some other chlorinated biphenyl." (Paton Dep. Tr. at 43:17-22 (TX 21).)

263.6 Dr. Paton explained, “the detection methods in those days, on chromatography and mass spectrometry, which . . . are very prevalent today” were at that time “*an evolving science*, if you will, and so it was by no means clear what exactly [Jensen] had found.” (Paton 08/26/2009 Dep. Tr. at 43:23-44:4 (TX 21) (emphasis added).) As of March 1969, Monsanto was still questioning whether the “PCBs” found by Dr. Jensen and by subsequent research studies in California were actually PCBs “or whether they are compounds which, due to the metabolism of other materials in the marine environment” only appear to be PCBs. (TX 3567.)

264. Dr. Paton testified that around that time, Monsanto told NCR that it was still not sure whether the materials reported in those studies were actually PCBs. (Paton 08/26/2009 Dep. Tr. at 110:2-111:4 (TX 21).)

264.1 In May of 1969, Monsanto believed that it was necessary to put forth “a considerable Monsanto effort” in order “to obtain the necessary analytical and toxicological information for dealing with this threat to our commercial operations”. (Vodden 08/25/2009 Dep. Tr. at 94:10-95:2 (TX 26).)

264.2 Monsanto assigned Dr. Scott Tucker to review Dr. Jensen’s work. (Tucker 08/19/2009 Dep. Tr. at 13:15-14:1 (TX 64).) Dr. Tucker testified that he was eventually able to validate the “analytical methodology” of Dr. Jensen’s team but that “[m]any of their conclusions that they drew were really conjecture or viewpoint and were hypothesis and that kind of stuff.” (Tucker 08/19/2009 Dep. Tr. at 15:2-15 (TX 64).)

265. According to Dr. Paton of Monsanto, the research at the time indicated that it was only the higher-chlorinated PCBs similar to Aroclor 1254 and 1260 that may persist in the environment. (Paton 08/26/2009 Dep. Tr. at 125:5-126:17 (TX 21).)

265.1 Prior to 1969 (and certainly before 1967), NCR did not have the knowledge necessary to qualify as an arranger because the PCBs used in CCP (Aroclor 1242) were not believed to persist and accumulate in the environment, including by those most closely studying the issue: scientists, government agencies and Monsanto, the sole producer of PCBs. (Williams R. (12/3/2014) at 20-84 (TX 2580).) No scientific literature published before 1971 identified Aroclor 1242 as a source of PCBs in the environment. (*See infra* § III.E(4).)

265.2 The significance of PCBs being found in the environment was unknown. *See infra* § III.E(5).)

265.3 As of November 1969, researchers reviewing the scientific literature on PCBs concluded that “[t]he significance of [PCB] contamination has not yet been evaluated due, in part, to the lack of systematic analytical procedures for the quantitative and qualitative determinations of the components of chlorinated biphenyl mixtures”. (TX 3568 at -228). “The toxicity and sublethal effects of the chlorinated biphenyls to biological systems has not been thoroughly evaluated” and that further investigations are needed before “control measures can be considered”. (TX 3568 at -230-31.)

266. No government agency identified Aroclor 1242 as a source of PCBs in the environment until after the Production Period. (*See infra* § III.E(4).)

266.1 John Hesse, MDNR's Chief PCB regulator, testified that MDNR did not report observations of Aroclor 1242 in the environment until 1972. (Hesse 9/25/2014 Dep. Tr. at 63:14-22 (TX 363).) MDEQ, the successor to MDNR, confirmed that this was the case. (MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 146:25-147:15 (TX 346).)

266.2 In September 1971, representatives from several federal agencies formed the Interdepartmental Task Force on PCBs, whose objectives were to better understand PCBs and to formulate a government response. In May 1972, the Task Force issued a report titled "Polychlorinated Biphenyls and the Environment". (TX 3570 at -271.)

266.3 In the report, the task force stated that after reviewing "all of the available scientific information on various aspects" of the PCB issue, it "found much data that it regards as inadequate and many questions that remain unanswered". (TX 3570 at -281.)

266.4 The task force also reported that "[a]t the levels in which they are found, PCBs do not appear to present an imminent hazard" to humans and that the "acute toxicity of commercial PCBs in experimental animals appears to be low". (*Id.* at -296-97.) The task force further concluded that "[t]here currently are no toxicological or ecological data available to indicate that the levels of PCBs currently known to be in the environment constitute a threat to human health." (TX 3570 at -282.)

267. The United States did not ban the manufacture or importation of PCBs until 1979, eight years after NCR stopped using Aroclor 1242 in CCP. (TX 3484.) The EPA's ban specifically exempted CCP from continued use. (TX 3484 ("[t]he amount of PCB on each sheet of carbonless copy paper is extremely small. In view of these practical considerations and because the potential PCB exposure and risks to human health or the environment are negligible, EPA has concluded that this activity does not present an unreasonable risk and is authorizing the continued use of existing PCB carbonless copy paper.").)

C. NCR Could Not Have Arranged for the Disposal of Any More than a Small Amount of PCBs Found at the Site (before or after 1969)

268. NCR can be responsible for no more than a small amount of PCBs at the Site because (i) 25% of the PCBs at the Site are not from CCP, (ii) only a small amount of PCBs from CCP could have come from channels owned by NCR, (iii) the vast majority of PCBs from CCP were discharged before 1969, and (iv) there is only minimal evidence of NCR "arrangements" for the disposal of CCP.

(1) Twenty-five Percent of the PCBs at the Site Are Not from CCP

269. NCR can have no responsibility for the 25% of the PCBs in OU5 that were released from sources other than the recycling of CCP.

269.1 CCP only contained Aroclor 1242. (TX 1626.)

269.2 Aroclor 1254 makes up 25% of the PCBs in the sediments in the Kalamazoo River between Morrow Lake and Allegan Dam and in the former impoundment areas. (*KRSG v. Eaton Corp.*, 258 F. Supp. 2d 736, 755 (W.D. Mich. 2002); TX 11387 at -646.)

269.3 Aroclor 1254 is not associated with CCP. (MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 178:4-6 (TX 346).)

269.4 Aroclor 1254 is present in the Kalamazoo River in significant quantities. (MDEQ 30(b)(6) 10/29/2014 Dep. Tr. Dep. Tr. at 177:9-17 (TX 346).)

269.5 The Kalamazoo River upstream from the confluence with Portage Creek contained largely Aroclor 1254. (TX 4194 at -747; MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 174:21-17 (TX 346).)

(2) Only a Small Amount of PCBs from CCP Could Have Come from Channels Owned by NCR

270. Although NCR manufactured CCP, only a small amount of PCBs at the Site could have been discharged from the recycling of CCP broke or trim generated by NCR's affiliates, and an even smaller amount during the time that NCR owned them. (Wittenbrink R. (12/05/2014) at 18 (TX 144).)

271. The vast majority of CCP recycled at the Site came from entities not owned by NCR. (Wittenbrink R. (12/05/2014) at 18, 20-21 (TX 144).)

272. All CCP recycled generated during the Production Period came from: (i) CCP broke from the Coating Companies (ACPC, CPM, Mead, and Nekoosa), (ii) Converting Companies (Systemedia or Independent Converters), and (iii) post-consumer sources. (Frazier R. (12/05/2014) at 29 (TX 4641); Wittenbrink R. (12/05/2014) at 16 (TX 144).)

273. Although NCR owned Systemedia's facilities for the whole Production Period, it only owned ACPC and CPM for a short time at the end of the Production Period. (Wittenbrink R. (12/05/2014) at 15 (TX 144).)

273.1 ACPC operated in Appleton, Wisconsin and coated CCP with CCP emulsion from 1953-1971. (Phase I PTO ¶ 22.)

273.2 ACPC was independent of NCR until NCR acquired it on September 30, 1970. (TX 12285.)

273.3 CPM was independent of NCR until NCR acquired it on July 28, 1969. (TX 12284.)

273.4 NCR owned Systemedia's facilities throughout the Production Period. (TX 5740 at -488.)

273.5 At all times, Mead and NCR have been separate corporations. (Phase I PTO at 6, ¶ 52.) Mead controlled how its CCP broke was gathered, baled, packed, shipped and sold. (Phase I PTO at 6, ¶ 59.) NCR did not own or possess CCP broke produced by Mead. (Phase I PTO at 6, ¶¶ 57-58; NCR Phase I PFOF ¶¶ 127-139.)

273.6 At all times, Nekoosa and NCR have been separate corporations. Nekoosa controlled how its CCP broke was gathered, baled, packed, shipped and sold. NCR did not own or possess CCP broke produced by Nekoosa.

273.7 NCR never owned or operated any Independent Converters. (Frazier R. (12/05/2014) at 29 (TX 4641).)

273.8 NCR never sold or transferred post-consumer CCP. (Frazier R. (04/17/2015) Dep. Tr. at 42:2-9 (TX 189).)

274. 1.337 billion lbs of CCP were manufactured with Aroclor 1242. (TX 3112 at -525) (data for 1957-1971); TX 1164 (data for 1957-1971); TX 1149 at -613 (ACPC data for 1953-1973); (TX 1767 at -58-59 (Mead data for 1955-1957); Wittenbrink R. (2/27/2015) App. B, Ex. A.) (TX 2484).

274.1 Mead produced 462.30 million lbs of CCP from 1955-1971. (TX 1767 at -058-59) (annual data from 1955-1971 with value for 1971 discounted by 2/3 because NCR's emulsion ceased using Aroclor 1242 in April 1971); Wittenbrink R. (2/27/2015) App. B, Ex. A. (TX 2484).)

274.2 CPM produced 17.26 million lbs of CCP from 1970-1971. (TX 1595 at -722-724) (CPM emulsion purchases – Jan. 1970-Oct. 1970); TX 1160 at -987-88 (CPM emulsion purchases – Jan. 1971-Apr. 1971); TX 4920 at -502-507 (CPM emulsion purchases – Jan. 1970-Nov. 1970); Wittenbrink R. (2/27/2015) App. B, Ex. A.) (TX 2484).)

274.3 Nekoosa produced 3.30 million lbs of CCP from 1970-1971. (TX 1595 at -723-724 (Nekoosa emulsion purchases – Jan. 1970-Oct. 1970); TX 1160 at -987-988 (Nekoosa emulsion purchases – Jan. 1971-Apr. 1971); TX 4920 at -502-507 (Nekoosa emulsion purchases – Jan. 1970-Nov. 1970); Wittenbrink R. (2/27/2015) App. B, Ex. A.) (TX 2484).)

274.4 ACPC produced 858.30 million lbs of CCP from 1954-1971. (TX 1149 at -613) (production data – 1954-1956; 1957-1971 calculated as difference between total CCP production and production by all other coating companies); Wittenbrink R. (2/27/2015) App. B, Ex. A (TX 2484).)

275. Only 40% (approximately 538.53 million lbs) of all CCP manufactured was recycled in some form by recycling mills nationwide. (Addendum A; Wittenbrink R. (2/27/2015) App. B, Exs. A, D. (TX 2484).)

275.1 Approximately 10.9% (58.65 million lbs) of CCP recycled nationwide was made up of broke generated by ACPC. (Wittenbrink R. (2/27/2015), App. B, Ex. D

(TX 2484); TX 1305 at -054 (approximately 7% of ACPC production generated as broke); TX 1772 at -35 (observing that EPA study assumed 98% recovery rate for converter trim).)

275.2 Approximately 0.2% (1.18 million lbs) of CCP recycled nationwide was made up of broke generated by CPM. (Wittenbrink R. (2/27/2015) App. B, Ex. D (TX 2484); TX 1305 at -049) (assume 7% of broke rate); TX 1772 at -35 (observing that EPA study assumed 98% recovery rate for converter trim).)

275.3 Approximately 8.4% (45.31 million lbs) of CCP recycled nationwide was made up of broke generated by Mead. (Wittenbrink R. (2/27/2015) App. B, Ex. D (TX 2484); TX 1242 at -120 (approximately 10% of production generated as broke); TX 1772 at -35 (observing that EPA study assumed 98% recovery rate for converter trim).)

275.4 Approximately 0.04% (45.31 million lbs) of CCP recycled nationwide was made up of broke generated by Nekoosa. (Wittenbrink R. (2/27/2015) App. B, Ex. D (TX 2484); TX 1305 at -054 (assume 7% of broke rate); TX 1772 at -35 (observing that EPA study assumed 98% recovery rate for converter trim).)

275.5 Approximately 40.3% (217.032 million lbs) of CCP recycled nationwide was made up of trim generated by Independent Converters. (Wittenbrink R. (2/27/2015) App. B, Ex. D (TX 2484); TX 1307 at -220 (approximately 20% of coated CCP (less coating broke) generated as converter trim); TX 1772 at -35 (observing that EPA study assumed 98% recovery rate for converter trim).)

275.6 Approximately 3.4% (18.09 million lbs) of CCP recycled nationwide was made up of trim generated by Systemedia. (Wittenbrink R. (2/27/2015) App. B, Ex. D (TX 2484); McIntosh 3/15/2012 Dep. Tr. at 132:1-19 (TX 49) (observing Systemedia converting operations more efficient than non-NCR converters (15% trim rate applied)); TX 1772 at -35 (observing that EPA study assumed 98% recovery rate for converter trim).)

275.7 Approximately 36.8% (198.05 million lbs) of CCP recycled nationwide was made up of post-consumer CCP. (Scott R. (1/30/2015) Ex. 21(TX 2507); API-GF071731 at -818 (TX 5744) (20% recovery rate of post consumer CCP applied to CCP finished products, *i.e.* total production less broke and trim); Wittenbrink R. (2/27/2015) App. B, Ex. D (TX 2484).)

276. Only 14.5% (approximately 77.92 million pounds) of all CCP recycled nationwide came from NCR's affiliates, *i.e.*, ACPC, CPM, and Systemedia. (Wittenbrink R. (2/27/2015) App. B, Ex. D (TX 2484).)

277. Only 4.2% (approximately 22.67 million pounds) of all CCP recycled nationwide came from NCR's affiliates when NCR owned those entities.

277.1 Approximately 3.39 million lbs of recycled CCP was CCP broke generated by ACPC after NCR acquired it on September 30, 1970. (Wittenbrink R. (2/27/2015) App. B, Table 6 (TX 2484) TX 12884.)

277.2 Approximately 1.18 million lbs of CCP broke generated by CPM after NCR acquired it on September 30, 1970. (Wittenbrink R. (2/27/2015) App. A, Table 6. (TX 2484))

277.3 Approximately 18.09 million lbs of recycle CCP was CCP trim generated by Systemedia. (Wittenbrink R. (2/27/2015) App. B, Ex. D (TX 2484).)

278. During the Production Period, NCR operated 12 Systemedia facilities throughout the country. (Wittenbrink R. (2/27/2015) App. B, Ex. G. (TX 2484)) Only eight of those facilities processed CCP. (Wittenbrink R. (2/27/2015) App. B, Ex. 6 (TX 2484).) There is no evidence or allegation that any NCR-arranged CCP reached the Site from Systemedia facilities other than Systemedia's (i) Washington Courthouse, Ohio facility; (ii) Viroqua, Wisconsin facility; and (iii) Dayton, Ohio facility. (Wittenbrink R. (2/27/2015) App. B, Ex. G (TX 2484); TX 4849 at -079; TX 4851 at -168; TX 4850 at -148; TX 2102 at -942; TX 2099 at -917-918; TX 4848 at -059; TX 11738 at -420; TX 3359 at -888; TX 11627 at -909; TX 3282; TX 3302 at -689-690; TX 11736 at -337; TX 1693 at -038; TX 3300 at -040; TX 3359 at -888; Rupard 2/3/2012 Dep. Tr. at 9:15-10:2, 10:13-11:3, 10:6-21, 11:7-9; 11:14-18, 14:18-15:19, 17:3-6, 25:15-26, 30:18-31:19, 38:11-20, 47:11-48-11, 50:3-16, 62:17-63, 41:6-8 (TX 47); Clason 2/17/2012 Dep. Tr. at 10:11-17, 12:20-13-5, 21:6-8, 30:13-20, 35:9-16, 37:18-38:3, 56:17-57:5, 57:10-12, 63:16-22 (TX 48); McIntosh 3/15/2012 Dep. Tr. 60:19-61:1; 93:2-11 (TX 49); Gallagher 1/25/2012 Dep. Tr. at 79:7-12, 84:13-20 (TX 33); Self 3/16/2012 Dep. Tr. at 21:9-14, 24:2-20 (TX 51); Gilmore 3/16/2012 Dep. Tr. at 16:14-20, 20:7-12. (TX 50).)

278.1 In response to an interrogatory request asking the Mill Parties to identify "any transaction in which NCR provided (directly or indirectly) CCP recycled, and PCBs discharged, at the Site", the Mill Parties did not identify allegations that CCP trim arrived at the Site from any Systemedia facilities other than Systemedia's Washington Courthouse Ohio facility; Viroqua, Wisconsin facility; Dayton, Ohio facility. (*See* TX 12412; TX 12441; TX 12440.)

278.2 GP's Phase I Proposed Findings of Fact make no contentions that CCP trim arrived at the Site from any Systemedia facilities other than Systemedia's Washington Courthouse Ohio facility; Viroqua, Wisconsin facility; Dayton, Ohio facility. (*See* GP Phase I PFOF.)

278.3 IP's expert, Dr. Frazier, is "unaware of any documents or testimony directly linking the Viroqua facility to Kalamazoo River mills". (Frazier R. (12/5/2014) at 67 (TX 4641).) GP's expert, Dr. Dolan is also unaware of "any documents that specifically link a sale of carbonless broke from Washington Court House to a specific Kalamazoo mill". (Dolan, Phase I Tr. at 861:10-14.)

279. Only 12.5% (approximately 67.33 million lbs) of all CCP recycled came from ACPC, CPM, and the three Systemedia facilities alleged by the Mill Parties to have sold CCP

trim to any of the Kalamazoo Mills. (Wittenbrink R. (2/27/2015) at 8, Table 9, Ex. D (TX 2484).)

279.1 The CCP trim recycled that was generated by the three Systemedia facilities identified by the Mill Parties amounts to no more than approximately 1.39% (approximately 7.49 million lbs) of all CCP ever recycled, or 0.56% of all CCP ever made. (Wittenbrink R. (2/27/2015) App. B, Table 6; Table 9, Ex. G (TX 2484).)

280. Only 2.24% (approximately 12.07 million lbs) of all CCP recycled from NCR-affiliated entities (ACPC, CPM, and three identified Systemedia facilities) was generated when NCR owned those entities. (Wittenbrink R. (1/30/2015) Ex. D (TX 2483).)

280.1 Approximately 3.39 million lbs of recycled CCP was CCP broke generated by ACPC after NCR acquired it on September 30, 1970. (Wittenbrink R. (2/27/2015) App. A, Table 6 (TX 2484); TX 12285)

280.2 Approximately 1.18 million lbs of CCP broke generated by CPM after NCR acquired it on September 30, 1970. (Wittenbrink R. (2/27/2015) App. A, Table 6. (TX 2484); TX 12285.)

280.3 Approximately 7.49 million lbs of CCP broke was generated by Systemedia's Viroqua, Dayton, and Washington Courthouse facilities throughout the Production Period. (*See* Wittenbrink R. (2/27/2015) App. B, Tables 8 & 9 (TX 2484).)

281. NCR cannot be equitably responsible for recycled CCP broke generated by Mead.

281.1 GP settled with Mead and agreed to indemnify it for:

“any and all Claims which [GP] now [has] or may hereafter have, relating to the Response Action or the release of Hazardous Substances, Pollutants, or Contaminants at the Site, including but not limited to Claims arising under Sections 107 and 113 of CERCLA, Section 7003 of RCRA, MERA, and equivalent state or federal law. Without limitation, the released Claims include; (i) costs incurred to date by KRSB and the Parties investigating and remediating the Site, including but not limited to costs pertaining to the AOC, RI/FS, and any future CERCLA remedial or removal action and their equivalents; and (ii) past, present, and future costs of Response Actions and their equivalents; and (iii) CERCLA natural resource damages.” (TX 4991 at -860-61 -863 (stating that Mead “sold NCR paper broke to the Paper Mills”).)

281.2 At all times, Mead and NCR have been separate corporations. (Phase I PTO at 6, ¶ 52.) NCR did not own or possess CCP broke produced by Mead. (*Id.* ¶¶ 57-58; *see also* NCR Phase I PFOF ¶¶ 127-39.) Mead controlled how its CCP broke was gathered, baled, packed, shipped and sold. (Phase I PTO at 6, ¶ 59.)

(3) The Vast Majority of PCBs from CCP Were Discharged Before 1969

282. Because the Court did not find that NCR or any of its affiliates had—and they did not have—the requisite intent to be liable as an arranger before 1969, NCR cannot be equitably responsible for PCB contamination arising from CCP recycled prior to 1969. (*See generally* Phase I Opinion; *see also* § III.E)

283. Only 29.4% of all CCP was *made* after 1968, during the period when the Court held NCR could be liable as an arranger. (Wittenbrink R. (2/27/2015) App. B, Ex. A (TX 2484).)

284. Only 34.5% of all CCP recycled was *recycled by mills nationwide* after 1968, during the period when the Court held NCR could be liable as an arranger. (Wittenbrink R. (2/27/2015) App. B, Ex. D (TX 2484).)

285. Only 4.6% of all CCP *recycled by mills nationwide* after 1968 was CCP broke or trim generated by entities affiliated with NCR. (Wittenbrink R. (2/27/2015) App. B, Ex. D (TX 2484).)

(4) There Is Minimal Evidence of NCR “Arrangements”

286. Because NCR’s liability at the Site is limited to arranger liability, it can only be equitably responsible for PCB contamination arising from recycled CCP broke and trim for which there is direct evidence was arranged by NCR after 1968. That evidence corresponds to no more than two truckloads of CCP delivered to the KPC Mill. (*See* Edgerton 12/2/2011 Dep. Tr. at 24:20-25:10; 38:5-39:2 (TX 40); Edgerton 9/12/2012 Dep. Tr. at 152:7-153:19 (TX 12).)

287. While 13 of the 14 Kalamazoo Mills recycled some amount of CCP and discharged PCBs to the Site (Scott R. (2/27/2015) Ex. 1 (TX 2508)), the Mill Parties have not identified any evidence that CCP broke or trim from any of NCR’s affiliates was recycled at 9 of the 14 Kalamazoo Mills: (i) the Angell Street Mill, (ii) the Fountain Street Mill, (iii) the Sutherland Mill, (iv) the KVP Mill, (v) the Otsego-Menasha Mill, (vi) the Plainwell Mill, (vii) the MacSimBar Mill, (viii) the National Gypsum Mill, (ix) the Hawthorne Mill.

287.1 NCR asked the Mill Parties to identify “any transaction in which NCR provided (directly or indirectly) [CCP] recycled, and PCBs discharged, at the Site”. (NCR’s Interrogs. to the Other Parties, dated May 19, 2014, Interrog. No. 5 (TX 4461).)

287.2 GP’s Phase I Findings of Fact assert no facts regarding the (i) Rex Mill, (ii) Hawthorne Mill, (iii) Angell Street Mill, (iv) Fountain Street Mill, (v) MacSimBar Mill, (vi) Otsego-Menasha-Mill, (vii) National Gypsum Mill. (*See* GP Phase I PFOF ¶ 190 (defining Kalamazoo Recycling Mills as (a) Plainwell Mill, (b) KPC Mill, (c) Bryant Mill, (d) Monarch Mill, and (e) King Mill, (f) KVP Mill and (g) Sutherland Mill).)

288. Regarding the Allied Mills (Bryant, Monarch, King, and Rex Mills), the Mill Parties point to alleged evidence that predates the time when NCR has been held to have had the knowledge the Court found necessary to hold it liable as an arranger.

288.1 The Heinritz letter dated May 19, 1965, states that “limited quantities” of broke from ACPC arrived at the Allied Mills (without specification of which mill) prior to May 19, 1965. (See TX 1240 (authenticity and admissibility challenged by NCR); GP Phase I PFOF ¶¶ 284-286.) The Heinritz letter also pre-dates the time that NCR owned ACPC. (See TX 12285.)

289. Regarding the KPC Mill, the Mill Parties point to Mr. Edgerton’s testimony and GP’s ledger of waste paper shipments as evidence purportedly reflecting transactions in which NCR’s affiliates provided CCP to the KPC Mill.

289.1 The amount of CCP broke or trim reflected by the three 1968 entries cited in the Court’s Phase I Opinion (Phase I Opinion at 21) in the 16,000-entry ledger of waste paper shipments received by the KPC Mill (TX 1833 at -470, -494, -524) corresponds to approximately 232,000 pounds of CCP, and make up less than 1% of all CCP recycled by the Kalamazoo Mills. (Wittenbrink R. (2/27/2015) App. B, Ex. A, Ex. D (TX 2484); Scott R. (2/27/2015) Ex. 1 (TX 2508).) The ledger indicates that the entries were received by the KPC Mill from a paper broker, but do not indicate whether the subject paper was CCP broke or trim received from one of NCR’s affiliates. (TX 1833 at -470, -494, -524.) All three shipments, however, predate the time NCR owned ACPC or CPM (See TX 12285; TX 12284.)

289.2 The alleged evidence of actual transactions between one of NCR’s affiliates and the KPC mill is limited to two truckloads after 1968. (Edgerton 12/2/2011 Dep. Tr. at 24:20-25:10; 38:5-39:2 (TX 40); Edgerton 9/12/2012 Dep. Tr. at 152:7-153:19 (TX 12).) Assuming a truckload hauled approximately 41,000 lbs. of paper, the alleged evidence related to the KPC Mill amounts to 0.003% of all CCP manufactured and of 0.0076% of all 1.3 billion lbs of CCP recycled. (Wittenbrink R. (2/27/2015) Ex. A, Ex. D (TX 2484); Hunter 11/16/2011 Dep. Tr. at 18:10-15 (TX 39) (testimony that backhauled trucks carried between 37,000 and 45,000 lbs of paper.)

290. Even assuming 5, 10 or even 20 truckloads of NCR-arranged CCP reached the KPC Mill (or the Site), no more than a minimal amount of CCP “arranged” by NCR reached the Site.

Number of Truckloads	Total Amount of CCP (lbs)	% of Total CCP Manufactured	% of Total CCP Recycled	% of Total CCP Recycled by KZ Mills
5	205,000	.015%	.038%	.63%
10	410,000	.03%	.076%	1.26%
20	820,000	.06%	.152%	2.52%

291. The Mill Parties point to alleged direct evidence that the Site is contaminated with PCBs released from paper mill operations; the Kalamazoo Mills recycled CCP (without any reference to source of recycled CCP); the Kalamazoo Mills discharged PCBs; CCP was a desirable waste paper furnish; the existence of transportation infrastructure, such as truck routes and rail tracks, between the Kalamazoo Mills and ACPC, CPM, or Systemedia facilities; shipments of CCP broke from Mead; characteristics of the scrap paper market during the Production Period; alleged supplier

relationships between the Kalamazoo Mills and NCR's affiliates or locations near NCR's affiliates and the *potential* that delivery trucks "backhauled" CCP broke or trim to Kalamazoo; brokers of wastepaper purchased broke or trim from NCR and either maintained operations in the Kalamazoo area or sold waste paper to any of the Kalamazoo Mills; lab reports of samples of "ACPC waste paper" (but not CCP manufactured with PCBs) were found at the KVP or Sutherland Mills in 1975 and documents noting that KVP or Sutherland Mills used CCP broke as furnish for its operations that make no reference to its sources (NCR or otherwise). None of this alleged evidence shows that NCR arranged for the disposal of CCP at any of nine mills above. (GP's Supp. Ans. and Objs. to NCR's Interrogs. to the Other Parties, dated Jul. 24, 2014, Interrog. No. 5 (incorporating by reference GP's Phase I PFOF and GP's Ans. and Objs. to NCR's First Set of Interrogs., dated Apr. 11, 2012, Resp. to Interrog. No. 1) (TX 12412); IP's Further Supp. and Restated Resps. to Certain of NCR's Interrogs. to the Other Parties, dated Dec. 2, 2014, Interrog. No. 5 (incorporating evidence presented in Phase I and GP's Supp. Ans. and Objs. to NCR's Interrogs. to the Other Parties, dated Jul. 24, 2014, Response to Interrog. No. 6) (TX 12440); Weyerhaeuser's Second Supp. Ans. and Objs. to NCR's Interrogs. to the Other Parties., dated May 29, 2015, Interrog. No. 5 (TX 12441) (identifying no evidence).)

D. Standard Allocation Analyses Point to a Very Small Share for NCR

292. Responsibility for cleanup of the Site can be determined based on a volumetric analysis and a discharge analysis. NCR has a small share under either analysis.

(1) Discharge and Volumetric Analyses Set Forth by NCR Expert John Butler

293. NCR's responsibility for cleanup of the river can reasonably be determined based on a discharge and volumetric analysis of PCB contamination of the river today, which takes into account the following factors: (i) the amount of Aroclor 1242 discharged by the Kalamazoo Mills into the river from 1954-1981 based on estimates provided by various experts in this litigation; (ii) the stand-alone amount of sediment and floodplain soil currently contaminated with Aroclor 1242 released by the Kalamazoo Mills after either January 1, 1967, or January 1, 1969, in excess of 1ppm and 20ppm thresholds, respectively; and (iii) NCR's market share of recycled CCP following January 1, 1969, and January 1, 1967. In addition, NCR's responsibility for cleanup of the land-based portions of the Site (*i.e.*, landfill and former mill properties) can be determined based on the amounts of Aroclor 1242 discharged through solid waste by the relevant mills, and NCR's market share for recycled CCP after January 1, 1969, and January 1, 1967.

294. OU5. NCR should bear no more than 2% of the PCB cleanup costs for the entire river resulting from PCB discharges by the Kalamazoo Mills after January 1, 1969 (and 2% after January 1, 1967) based on estimates of PCB discharges by the various experts in this case and NCR's estimated share of the nationwide market for recycled CCP during the periods following those dates.

294.1 NCR's share of the Aroclor 1242 discharged to the River is 1.57% for from 1967 and 1.52% for 1969 forward, based on an annualization of Dr. Wolfe's

estimates of the amount of Aroclor 1242 discharged to the River (Wolfe R. (2/27/2015) at 17, Table 2) and the estimated share of the market for recycled CCP made up of CCP broke or trim from NCR's affiliates during those periods. (Butler R. (3/13/2015) at Tables 5-6 (TX 167).)

294.2 NCR's share of the Aroclor 1242 discharged to the River is 0.90% for 1967 forward and 0.70% for 1969 forward, based on Dr. Werner's estimates of the amount of Aroclor 1242 discharged to the River (Werner R. (1/30/2015) at Table 7 (TX 5802)) and the estimated share of the market for recycled CCP made up of CCP broke or trim from NCR's affiliates during those periods during those periods. (Butler R. (3/13/2015) at Tables 5-6 (TX 167).)

294.3 NCR's share of the Aroclor 1242 discharged to the River is 0.58% from 1967 or 1969 forward, based on Dr. Ram's estimates of the amount of total suspended solids discharged to the River (Ram R. (1/30/2015) at 188 (TX 5775)) and the estimated share of the market for recycled CCP made up of CCP broke or trim from NCR's affiliates during those periods during those periods. (Butler R. (3/13/2015) at Tables 5-6 (TX 167).)

294.4 NCR's share of the Aroclor 1242 discharged to the River is 0.5% for 1967 forward and 0.25% from 1969 forward, based on Dr. Allen's estimates of the amount of Aroclor discharged to the River (Allen R. (2/27/2015) at App. C (TX 12244)) and the estimated share of the market for recycled CCP made up of CCP broke or trim from NCR's affiliates during those periods during those periods. (Butler R. (3/13/2015) at Tables 5-6 (TX 167).)

294.5 On a work-area-by-work-area basis of the River portion of the Site, NCR should bear no more than the following percentages of responsibility based on the stand-alone volume and area of contaminated sediment and floodplain soil likely to require dredging or capping because of Aroclor 1242 discharged by the Kalamazoo Mills after January 1, 1969 (and January 1, 1967) and the estimated share of the market for recycled CCP made up of CCP broke or trim from NCR's affiliates during those periods during the period following those dates:

After January 1, 1969

(Based on a river model simulation of PCB releases estimated by Dr. Allen.)
(Addendum C)

OU5 Work Area	% of Contamination Volume after Jan. 1 1969	% of Contamination Area after Jan. 1, 1969
Work Area 1A	.14%	.14%
Work Area 1B	.15%	.2%
Work Area 2	.19%	.2%
Work Area 3	.18%	.17%
Work Area 4	.19%	.21%
Work Area 5	.19%	.19%
Work Area 6	.32%	.42%
Work Area 7	.18%	.19%

(Butler R. (7/21/2015) App. C2, Tables 8A-C (TX 171).)

After January 1, 1967

(Based on a river model simulation of PCB releases estimated by Dr. Allen.)
(Addendum C)

OU5 Work Area	% of Contamination Volume after Jan. 1 1967	% of Contamination Area after Jan. 1, 1967
Work Area 1A	.61%	.61%
Work Area 1B	.35%	.41%
Work Area 2	.38%	.4%
Work Area 3	.39%	.37%
Work Area 4	.41%	.42%
Work Area 5	.19%	.4%
Work Area 6	.49%	.58%
Work Area 7	.4%	.38%

(Butler R. (7/21/2015) App. C2, Tables 8A-C (TX 171).)

295. OU1. NCR should bear no more than 2.4% of the PCB cleanup costs at OU1 resulting from PCB discharges by the Bryant and Monarch Mills after 1968 (and 2.4% after 1966).

295.1 OU1 (Bryant Mill Pond and landfill properties) received paper mill waste from the Bryant and Monarch Mills until the late 1980s. (*See supra* ¶ 138.)

295.2 Of the Aroclor 1242 estimated to have been discharged by the Bryant and Monarch Mills into OU1, 33% were released after 1968 and 51% were released after 1966. (*See Addendum C*.)

295.3 Of the 33% of Aroclor 1242 released after 1968 by the Bryant and Monarch Mills, no more than 5.6% could have come from CCP broke or trim (directly or

indirectly) from NCR's affiliates. (Butler R. (7/21/2015) App. E1 (TX 171).) As a result, no more than 1.8% ($5.6\% * 33\% = 1.8\%$) of the Aroclor 1242 released could be attributed to CCP broke or trim that was arranged by NCR.

295.4 Of the 51% of Aroclor 1242 released after 1966 by the Bryant and Monarch Mills, no more than 4.7% could have come from CCP broke or trim (directly or indirectly) from NCR's affiliates. (Butler R. (7/21/2015) App. E1 (TX 171).) As a result, no more than 2.4% ($4.7\% * 51\% = 2.4\%$) of the Aroclor 1242 released could be attributed to CCP that was arranged by NCR.

296. OU2 (Willow Blvd.). NCR should bear no more than 1.8% of PCB cleanup costs at the Willow Boulevard portion of OU2 resulting from PCB discharges by the KPC Mill after 1968 (and 1.9% 1966).

296.1 From 1967-1975, the Willow Boulevard portion of OU2 received excavated paper mill wastes from the King Highway Landfill, which, in turn, received paper mill waste from the KPC Mill from the late 1950s through 1975. (*See supra* ¶ 39.) Of the KPC Mill's discharges of Aroclor 1242 through solid waste generated by the KPC Mill for the period 1958-1975, only 22.6% was released after 1968 (39.5% released after 1966). (Addendum C; Butler R. (7/21/2015) App. A (TX 165).)

296.2 Of the 22.6% of Aroclor 1242 released after 1968 by the KPC Mill through its solid waste, no more than 5.6% could have come from CCP broke or trim (directly or indirectly) from NCR's affiliates. (Butler R. (7/21/2015) App. E1 (TX 171).) As a result, no more than 1.3% ($5.6\% * 22.6\% = 1.3\%$) of the Aroclor 1242 released could be attributed to CCP that was arranged by NCR.

296.3 Of the 39.5% of Aroclor 1242 released after 1966 by the KPC Mill through its solid waste, no more than 4.7% could have come from CCP broke or trim (directly or indirectly) from NCR's affiliates. (Butler R. (7/21/2015) App. E1 (TX 171).) As a result, no more than 1.8% ($4.7\% * 39.5\% = 1.9\%$) of the Aroclor 1242 released could be attributed to CCP that was arranged by NCR.

297. OU2 (A-Site). NCR should bear no PCB cleanup costs at the A-Site portion of OU2 resulting from PCB discharges by the King Mill before the arranger period.

297.1 The A-Site Landfill received paper mill waste from the King Mill from 1960 to 1967; from the King Highway Landfill, which, in turn, received paper mill waste from the KPC Mill, from 1975-77; and from the KPC Mill from 1977 to 1987. The King Mill discharged over 99% of the combined amount of Aroclor 1242 releases during these periods, all of which was released before 1969. (*See supra* ¶¶ 101, 141.)

298. OU3. NCR should bear no more than 1.3% of PCB cleanup costs at the OU3 King Highway Landfill resulting from PCB discharges by the KPC Mill after 1968 (and 1.9% after 1966).

298.1 The King Highway landfill received paper mill waste from the KPC Mill from 1958 until 1977. (*See supra* ¶ 144.) Of the KPC Mill's discharges of Aroclor 1242

through solid waste by the KPC Mill for the period 1958-1975, only 22.6% was released after 1968. (Addendum C; Butler R. (7/21/2015) at App. A (TX 171).)

298.2 Of that the 22.6% of Aroclor 1242 released after 1968 by the KPC Mill through its solid waste, no more than 5.6% could have come from CCP broke or trim (directly or indirectly) from NCR's affiliates. (Butler R. (7/21/2015) App. E1 (TX 171).) As a result, no more than 1.3% ($5.6\% * 22.6\% = 1.3\%$) of the Aroclor 1242 released could be attributed to CCP that was arranged by NCR.

298.3 Of that the 39.5% of Aroclor 1242 released after 1966 by the KPC Mill through its solid waste, no more than 4.7% could have come from CCP broke or trim (directly or indirectly) from NCR's affiliates. (Butler R. (7/21/2015) App. E1 (TX 171).) As a result, no more than 1.9% ($4.7\% * 39.5\% = 1.9\%$) of the Aroclor 1242 released could be attributed to CCP that was arranged by NCR.

299. OU4. NCR should bear no more than a *de minimis* amount of the PCB cleanup costs at OU4 12th Street Landfill resulting from PCB discharges by the Plainwell Mill after 1968 (and a *de minimis* amount after 1966).

299.1 The 12th Street Landfill received paper mill waste from the Plainwell Mill from approximately 1955 – 1981. (*See supra* ¶ 92.)

299.2 Of the Aroclor 1242 estimated to have been discharged by Plainwell Mill through its solid waste, 2.0% is estimated to have been discharged after 1968, and 3.8% after 1966. (*See* Addendum C.)

299.3 Of the 2% of Aroclor 1242 released after 1968 by the Plainwell Mill's solid waste, no more than 5.6% could have come from CCP broke or trim (directly or indirectly) from NCR's affiliates. (Butler R. (7/21/2015) at App. E1 (TX 171).) As a result, no more than 0.001% ($5.6\% * 2\% = 0.001\%$) of the Aroclor released could be attributed to CCP that was arranged by NCR.

299.4 Of the 3.8% of Aroclor 1242 released to landfill after 1966 by the Plainwell Mill's solid waste, no more than 4.7% could have come from CCP broke or trim sold (directly or indirectly) from NCR's affiliates. (Butler R. (7/21/2015) at App. E1 (TX 171).) As a result, no more than 0.001% ($4.7\% * 2\% = 0.001\%$) of the Aroclor released could be attributed to CCP that was arranged by NCR.

300. OU6. NCR's responsibility for OU6 is not at issue in this case, as the work for that area has been completed (*see supra* ¶ 172), and GP's claims for OU6 costs are time-barred. (Opinion and Order, dated Aug. 12, 2015 (Dkt. No. 787) at 18).

301. NCR should bear no PCB cleanup costs at the OU7 Plainwell Property resulting from PCB discharges by the Plainwell Mill before 1969 (or 1967).

301.1 No party in this case is claiming any costs at OU7. (*See, e.g.*, Weyerhaeuser 30(b)(6) 10/20/2014 Dep. Tr. at 168:6-169:5.)

301.2 In any event, the Plainwell Mills stopped deinking in 1963 (TX 4251 at -742, -747); and almost all of the PCB discharges onto the Plainwell property likely occurred prior to 1967. (*See* Addendum C.)

(2) Discharge Analysis Set Forth by NCR Expert Dr. Rausser

302. Responsibility for cleanup of the River can also reasonably be determined based on relative discharges of Aroclor 1242 into the River, taking into account the following factors: (i) the relative discharges of Aroclor 1242 by each of the Kalamazoo Mills based on estimates provided by various experts in this litigation; (ii) the parties potentially responsible for the discharges at each of the Kalamazoo Mills; (iii) the period during which NCR can be held liable as an arranger; (iv) the proportional assignment of any discharges made by non-parties; and (v) where two parties share responsibility for a single discharge, use an equitable division between them, taking into account differences in their roles. (Rausser R. (1/30/2015) ¶ 104 (TX 2500).)

303. Consideration of these factors shows that NCR should be allocated less than 1% for the entire River, as reflected in the following table.

NCR	0.22%
Georgia-Pacific	69.62%
International Paper	27.13%
Weyerhaeuser	3.02%

(Rausser R. (8/7/15) Attach. A, 6 (Table 13) (TX 221).)

304. Allocations also can be calculated with regards to four specific areas of the Kalamazoo River: (i) Portage Creek, (ii) Morrow Dam to the Confluence between Portage Creek and the Kalamazoo River (“The Confluence”), (iii) Confluence to Plainwell, and (v) Plainwell to Lake Michigan. (Rausser R. (1/30/15) ¶ 96 (TX 2500).) These areas correspond with mill locations along the Kalamazoo River. In particular, the Bryant and Monarch Mills were located on Portage Creek; the KPC, the Rex, the King, the Hawthorne and the National Gypsum Mills were located on the Kalamazoo River between Morrow Dam and the Confluence; the Sutherland and KVP Mills were located on the Kalamazoo River between the Confluence and Plainwell; and the Plainwell, the MacSimBar and the Otsego-Menasha Mills were located on the Kalamazoo River between Plainwell and Lake Michigan.

305. When based on an area-by-area approach, NCR’s allocations would range between 0% and less than 1%, as reflected in the following table.

	Area			
	Portage Creek	Morrow Dam to Confluence	Confluence to Plainwell	Plainwell to Lake Michigan
NCR	0%	0.34%	0.22%	0.22%
Georgia-Pacific	0%	99.66%	69.62%	69.62%
International Paper	100.00%	0%	27.13%	27.13%
Weyerhaeuser	0%	0%	3.02%	3.02%

(Rausser R. (8/7/15) at Attach. A at 6 (Table 14) (TX 221).)

306. Dr. Rausser also performed a simulation methodology (which is commonly used in economics, statistics and finance to synthesize multiple estimates) using various data from the parties' experts. The model confirms a reasonably specific range of allocations for NCR. (Relying on data provided in the Allen, Butler, Werner and Wolfe expert reports.)

307. As shown in the table below, a simulation methodology demonstrates that there is a narrow range of possible allocations for NCR when taking into account various methodologies for allocating responsibility.

	5th percentile	Average	Median	95th percentile
NCR	0.4%	2.7%	1.9%	7.9%
Georgia-Pacific	56.9%	61.5%	60.6%	69.2%
International Paper	22.3%	28.8%	27.1%	36.8%
Weyerhaeuser	2.7%	7.1%	3.9%	15.9%

(Rausser R. (8/7/2015) Attach. B at 2 (Table 5) (TX 221).)

308. NCR's small share of responsibility compared to the Mill Parties is commensurate with NCR's attenuated connection to both the Site and the release of Aroclor 1242 into the river.

309. NCR was economically remote from the actions that led to the release of Aroclor 1242 at the Site. (Rausser R. (1/30/2015) ¶ 22 (TX 2500).)

309.1 NCR's decisions involved neither the generation nor disposal of hazardous waste at the Site. (Rausser R. (1/30/2015) ¶ 37 (TX 2500).) NCR's primary economic decision was to manufacture CCP, but neither the manufacture of CCP nor its use by consumers released Aroclor 1242 at the Site. (Rausser R. (1/30/2015) ¶ 37 (TX 2500).)

309.2 For all of the CCP that was recycled at the Site, NCR had no involvement with the Mills' decisions to recycle. (Rausser R. (1/30/2015) ¶ 38 (TX 2500).)

309.3 The majority of CCP recycled at the Site was from post-consumer sources; NCR was economically removed from this CCP, as it passed through at least five or six different transfers in the value chain after its sale by NCR: NCR to converter company (not applicable in the case of CCP products manufactured by Systemedia); converter company to wholesaler or distributor; wholesaler or distributor to retailer; retailer to business/consumer end-user of the CCP; end-user to waste collection service; waste

collection service to recovered paper broker; and broker to mill operator. (Rausser R. (1/30/2015) ¶ 38 (TX 2500).)

309.4 NCR also was economically removed from the pre-consumer CCP broke and trim recycled at the Site, as the vast majority of pre-consumer CCP broke and trim that would have reached the Site would have been generated by coating and converting companies that NCR did not own or otherwise control. (*See supra* § III.C(2))

310. By contrast, the Mill Parties were deeply involved in the generation, treatment, and disposal of Aroclor 1242 at the Site, and their decisions and actions directly resulted in the release of Aroclor 1242 into the Site. (Rausser R. (1/30/2015) ¶ 22 (TX 2500).)

310.1 In particular, the Kalamazoo Mills made several operational decisions that directly contributed to the release of Aroclor 1242 into the Site, including: the Mills decided to use secondary fiber (which included CCP) as a major source of furnish for paper making; some of the Mills decided to deink secondary fiber (which included CCP) prior to use in the paper making process; the Mills decided to discharge their effluent into the Kalamazoo River (and sludge to landfills), thus discharging Aroclor 1242 at the Site; the Mills decided to forego or delay proper wastewater treatment. (Rausser R. (1/30/2015) ¶ 36 (TX 2500).)

E. NCR Manufactured CCP but Did Not Act with Culpable Intent

311. NCR did not produce CCP using PCBs with a culpable intent to harm the environment as evidenced by the following: (i) at the time NCR selected Aroclor 1242 for use in its CCP emulsion, studies did not suggest PCBs could be an environmental hazard; (ii) prior to and after selecting Aroclor 1242, NCR and others conducted toxicity tests, which showed that Aroclor 1242 was safe for use in CCP; (iii) during the Production Period, NCR was not aware of any studies indicating that Aroclor 1242 was an environmental hazard; (iv) no scientific articles published during the Production Period reporting finding Aroclor 1242 in the environment; (v) during the Production Period, it was unknown whether low levels of PCBs detected in the environment constituted a health hazard; (vi) during and after the Production Period, Monsanto assured its customers, the government, and the public that Aroclor 1242 was not an environmental hazard; (vii) NCR ceased using Aroclor 1242 in April 1971, before Aroclor 1242 was found to be an environmental hazard; (viii) use of PCBs was not banned until after the Production Period; (ix) the properties and effects of DDT did not indicate that PCBs were environmentally harmful; and (x) NCR did not conceal the fact that CCP contained PCBs.

312. In order to establish that a substance is an environmental hazard, it is necessary to establish both (i) that the substance bioaccumulates in the environment and (ii) that the substance would be hazardous to people and animals at that dose. (Guengerich R. (01/30/2015) at 7-8 (TX 2443).)

313. NCR could not have reasonably known or expected that its use of Aroclor 1242 in CCP manufacture of the recycling of CCP broke would result in environmental harm to water bodies. (Williams R. (12/03/2014) at 16.)

(1) At the Time NCR Selected Aroclor 1242 for Use in Its CCP Emulsion, Studies Did Not Suggest PCBs Could Be an Environmental Hazard

314. At the time NCR selected Aroclor 1242 for use in CCP, PCBs were not understood to be hazardous chemicals or dangers to the environment. “Although there were sporadic reports during the 1930s and 1940s in the industrial medical literature of toxic effects of PCBs and of mixtures containing PCBs, they were not generally regarded either as hazardous chemicals or as potential environmental contaminants.” (TX 3571 at -317.)

315. No studies suggested that PCBs of any type bioaccumulated. (Guengerich R. (01/30/2015) at 70 (TX 2443).)

316. Early studies of PCBs, and mixtures containing PCBs, were characterized by high levels of exposure and showed that PCBs could be used by workers following safety regulations. Given the very limited toxicity, if any, seen in workers with exposures to PCBs, there was no expectation that lower levels of environmental exposure would pose a risk. (Anderson R. (01/30/2015) at 32 (TX 2586).)

316.1 A 1937 workplace safety study of PCBs found that “these substances are very little toxic and operations employing them can easily be safeguarded.” (TX 1315.)

316.2 Early workplace safety articles recommended releasing PCB vapors to the outside to improve ventilation for the workers. (TX 2590 at -832; TX 11526 at -163-164.)

317. The only known effects on humans caused by PCBs alone were occupationally-caused acne (chloracne). (TX 1315; TX 1318 at -837; TX 2590 at -831; TX 4929 at -824; TX 1314 at -726.)

317.1 Occupationally caused chloracne is not an effect that was at any point in time (including today) considered relevant in the context of low-dose environmental exposures. (Guengerich R. (01/30/2015) at 32 (TX 2443).)

318. Many workplace and animal studies used chlorinated naphthalene, a chemical that is completely different from PCBs. Other studies only tested Aroclors with a higher chlorine content than Aroclor 1242. (Guengerich R. (01/30/2015) at 18 (TX 2443); TX 1316 at -769; TX 1315.)

(2) Prior to and After Selecting Aroclor 1242 as an Ingredient in Its CCP Emulsion, NCR and Others Conducted Toxicity Tests, which Showed that Aroclor 1242 was Safe for Use in CCP

319. Extensive toxicity testing by Monsanto, NCR, independent researchers, as well as the government indicated that Aroclor 1242 had negligible toxicity at the low doses used in CCP paper.

320. From the beginning of the Production Period, Monsanto provided information to NCR showing that Aroclor 1242 was safe for use.

320.1 In December 1953, Monsanto informed NCR that Aroclor 1242 was not acutely toxic. (TX 1357 at -896.)

320.2 In 1953, Monsanto instructed Mead employees that, “Aroclor does not have cumulative effects and does not cause liver damage. [Monsanto] do[es] not believe that there is an industrial hazard caused by [NCR’s] use of Aroclor or Formaldehyde under normal conditions.” (TX 3563 at -163.)

320.3 In 1955, NCR researchers, visiting a laboratory sponsored by Monsanto, concluded that “reports concerning the toxicity of the Aroclors will not be the cause of any concern for the National Cash Register Company. On the whole, at room temperatures, the Aroclors are given a fairly clean bill of health.” (TX 4722 at -865.)

320.4 In 1956, researchers sponsored by Monsanto, concluded that exposure to Aroclor 1242 vapors produced no detectable effects while similar exposure concentrations of Aroclor 1254 vapors produced liver injury. “Prolonged intermittent exposure of animals to the vapor of Aroclor 1242 (1.90 to 8.63 micrograms per liter) demonstrated no injury.” (TX 4931 at -945.)

320.5 In December 1970, the FDA reported on two long-term studies by Monsanto showing that neither rats nor dogs displayed significant changes after ingestion of Aroclor 1242 in 100-ppm doses for 12-15 months. (TX 4824 at -172.)

321. From 1955 onwards, NCR commissioned multiple Hill Top Research Institute, Inc. (Hill Top) studies to assess the potential toxicity of CCP and its components. (TX 4865, TX 4866; ,TX 11745; TX 11746; TX 11748; TX 4706; TX 3564.)

321.1 Collectively, these tests demonstrated that CCP and its components had low to negligible toxicity. (Anderson R. (01/30/2015) at 1 (TX 2586).)

321.2 In 1961, Hilltop toxicological studies of the emulsion concluded that the “acute oral toxicity, acute dermal toxicity and irritative potential, and acute eye irritative potential were all of a low order.” (TX 4707 at -546.) “[T]he toxic and irritative potential were sufficiently low that the material would not be required to bear precautionary labeling under the Federal Hazardous Substances Labeling Act.” (TX 4707 at -546.)

321.3 In 1967, Hilltop toxicological studies of the emulsion concluded that there was low to no oral toxicity for rats receiving high doses up to 21.5 ml/kg. (Anderson R. (01/30/2015) at 20 (TX 2586).)

322. In June 1969, the Arthur D. Little Institute in the U.K. sent a report to Wiggins Teape clearing NCR paper as safe for use. “The results of these tests indicated that there would appear to be no hazard to personnel in the handling of these components in the course of production of NCR paper nor to those using the finished products.” (TX 12509.)

323. NCR had no scientifically credible reason to conclude that the potential toxicity of CCP and its components would likely result in risks at environmental levels of exposure. (Anderson R. (01/30/2015) at 1 (TX 2586).)

323.1 Prior to the early 1970s, the existence of limited data suggesting PCBs could result in adverse chronic health effects during certain workplace exposure situations did not equate to knowledge that the compound would be an environmental contaminant. (TX 4726 at -902.)

323.2 In the early 1970s, it was generally accepted that exposure to a toxic agent below a level that induced observable effects would not pose a threat to human health. (TX 11710 at -259.)

(3) During the Production Period, NCR Was Not Aware of Any Studies Indicating Aroclor 1242 Could Be an Environmental Hazard

324. During the Production Period, the scientific understanding of PCBs was rapidly evolving and characterized by uncertainty about the toxicity, quantity, and persistence of PCBs.

324.1 The Wisconsin Department of Natural Resources described the use of PCBs during the Production Period as unregulated and the health effects as unknown. “The use of PCBs was unregulated and the potential health effects were unknown during this time period.”
(<http://ua.dnr.wi.gov/topic/ImpairedWaters/FoxRiver/original/pcbhistory.html>)

324.2 In April 1970, the American scientists Gilman Veith and Fred Lee published a review of the scientific literature on PCBs. They concluded that “[t]he significance of [PCB] contamination has not yet been evaluated due, in part, to the lack of systematic analytical procedures for the quantitative and qualitative determinations of the components of chlorinated biphenyl mixtures”. (TX 3568 at -228).) They further concluded that “[t]he toxicity and sublethal effects of the chlorinated biphenyls to biological systems has not been thoroughly evaluated” and that further investigations are needed before “control measures can be considered”. (TX 3568 at -230-231.)

324.3 In September 1971, Charles C. Edwards, M.D., Food and Drug Commissioner of the FDA, sought to calm the public regarding PCBs. “Public confusion has created public alarm and a feeling of still another crisis in the food supply. I know the confusion is unnecessary and I believe the alarm is greater than the facts will justify.” (TX 11885 at -901.)

325. The first identification of PCBs in environmental samples was done by Dr. Jensen in Sweden in 1966. (TX 1457 at -968).)

325.1 NCR had no reason to suspect that Dr. Jensen’s findings were PCBs coming from carbonless copy paper. (Rodricks 3/24/2015 Dep. Tr. at 139:15-19 (TX 206).)

325.2 Prior to this initial finding, no scientific publications had expressed a suspicion of PCB environmental contamination. (Rodricks Dep. Tr. at 155:17–156:3 (TX 206).) (Anderson R. (01/30/2015) at 33 (TX 2586).)

325.3 A report prepared for the U.S. government in 1972 summarized the state of knowledge. “Medical and public health interest in PCBs in the United States was meager before 1970. Until Soren Jensen of Sweden discovered in 1966 that PCBs were confused analytically with chlorinated hydrocarbons in an eagle, the toxicology literature on PCBs was limited to articles on patents, industrial aspects and hygienic implications.” (TX 11554 at -919.)

325.4 In February 1967, Monsanto sent a letter to NCR questioning the reliability of Jensen’s analytical methods. (TX 1466 at -037.)

325.5 Dr. Jensen used a new technology, a Gas Chromatograph – Mass Spectrometer, to identify PCBs in environmental samples. (TX 1466 at -043.)

325.6 During the Production Period, NCR did not have the necessary instrumentation to perform the chemical analysis needed to show that Aroclor 1242 persisted in the environment through the methods by which it was discharged into the environment, let alone the ability to itself research the low-dose, long-term effects of Aroclor 1242. (Guengerich R. (01/30/2015) at 43-44 (TX 2443).)

325.7 The first time the NCR Materials Research Group saw a GC-MS was at the end of the Production Period, in 1971. “The Pittsburgh conference (again held in Cleveland) had more exhibits and more conferees attending in previous years. Two relatively new and outstanding types of instruments being shown by many manufacturers were the analytical liquid chromatographs and the gas chromatograph-mass spectrometer combinations.” (TX 12497 at -848.)

326. The PCBs being detected in the environment resembled Aroclor mixtures with levels of chlorination higher than that of Aroclor 1242.

326.1 The PCBs Dr. Jensen identified in the environment were similar to Aroclor 1254. (TX 1466 at -051; Rodricks 3/24/2015 Dep. Tr. at 141:9-25 (TX 206).))

326.2 In December 1968, Dr. Robert Risebrough published the first U.S. publication that discussed the identification of higher chlorinated PCB mixtures in U.S. fish and wildlife. (TX 1489).)

326.3 In 1969 and 1970 environmental samples taken in the U.S. were found to contain PCBs most closely resembling a commercial formulation with 54% chlorination. (TX 4932 at -041-042; TX 4934 at -102-103 (“The GLC-MS spectra data show conclusively that most chemicals in the eagle samples are identical to components of Aroclor 1242.”); TX 4813 at -769) (“We have detected a polychlorinated biphenyl (PCB), Aroclor 1254, in the biota, sediment, and water of estuarine areas near Pensacola, Florida.”).)

327. During the Production Period, researchers had difficulty quantifying the PCB's detected.

327.1 Dr. Jensen had great difficulty in quantifying PCBs. (TX 1466 at -045; TX 11513.)

327.2 Analysis and quantification of PCBs was difficult. (Anderson R. (01/30/2015) at 38 (TX 2586).)

327.3 In 1972, Dr. Jensen reported that quantification still posed a problem. "Many attempts have been made to analyze PCB in the presence of chlorinated pesticides, but no really satisfactory method has yet been described. The same is true with the problem of the quantification of PCB." (TX 11677 at -300.)

328. During the Production Period, there was little understanding of how PCBs being detected were entering the environment.

328.1 A September 1970 article stressed the need for further study. "The most critical area for research on PCBs is to discover the major source(s) of escape into the environment." (TX 4852 at -978.)

328.2 The 1972 PCB Task Force reported that there was a "sparsity [sic] of knowledge about PCBs in the environment. Only general statements can be made about how PCBs reach the environment, how they reach target organisms, and how much is present." (TX 11095 at -584.)

328.3 In June 1971, the first detection of PCBs in food packaging in the U.S. took place. (TX 11095 at -586); TX 12506.)

329. During the Production Period, the toxicology of PCBs was not well understood.

329.1 Based on the early literature related to the effects of PCBs and chlorinated naphthalenes on workers (*i.e.*, at very high exposures), the conclusion was reached that toxicity of chlorinated hydrocarbons increased with the extent of chlorination. (TX 2950; TX 1315 at -754; TX 4713.)

329.2 In December 1970, the FDA reported that toxicology of PCBs was poorly known. "Despite the presence of PCBs in our environment in such quantity and in such conditions as to cause residues in food, the toxicology of these substances remains poorly defined." (TX 4824 at -169.)

329.3 A 1972 review of the scientific literature concluded that "[c]ompared to the chlorinated hydrocarbon pesticides, the toxicology of polychlorinated biphenyls remains rather poorly known." (TX 12136 at -351.)

329.4 In May 1972 the Task Force on PCBs summarized the sparse available toxicological information. "Compared to the chlorinated hydrocarbon pesticides, definitive aspects of acute, sub-acute and chronic toxicity still remain rather poorly

known.” And, “[d]espite the nearly four decades of PCB use in a broad spectrum of applications, the increasing awareness of its environmental aspects as well as an increasing number of recent mammalian toxicological investigations, aspects of *definitive* acute, sub-acute and chronic toxicity still remain poorly known as regards man. (TX 11095 at -723.)

**(4) No Scientific Articles Published During the Production Period
Reported Finding Aroclor 1242 in the Environment**

330. The scientific data available prior to the 1971 timeframe showed that Aroclors with lower chlorine content, such as Aroclor 1242, did not pose the same level of hazard as Aroclors with higher chlorine content, such as Aroclor 1254. Higher chlorinated PCB compounds, including Aroclor formulations of 54% and 60% chlorination, were identified in all of the studies where PCB residues were analyzed in environmental and wildlife samples. (Anderson R. (01/30/2015) at 43 (TX 2586).)

330.1 The early evidence on PCBs identified the higher chlorinated Aroclors and did not specifically indicate that lower chlorinated Aroclors such as 1242 were accumulating in the environment. (TX 3578 at -167.)

330.2 By May 1971, only higher chlorinated Aroclors had been found in sediment, fish, aquatic life, wildlife, and human fat. (TX 11095 at -671.)

330.3 Government officials and researchers did not generally know Aroclor 1242 as a contaminant accumulating and persisting in the water environment. (Williams R. (12/03/2014) at 55 (TX 2580).)

331. The first studies identifying Aroclor 1242 in environmental samples were published after the Production Period.

331.1 Robert Risebrough, a leading American scientist studying PCBs, did not identify Aroclor 1242 in the environment in published research until May 1971, after NCR had ceased the use of Aroclor 1242 in CCP. (TX 2229; Risebrough Dep. Tr. 181:15-182:21; 185:13-19 (TX 375).)

331.2 Gilman Veith and Fred Lee identified Aroclor 1242 in the environment in published research in November of 1971, six months after NCR had voluntarily ceased the use of Aroclor 1242 in CCP. (TX 12500.) They concluded that “[c]omprehensive toxicological studies are needed to fully evaluate the significance of PCBs in the environment.” (TX 12500 at -510.)

331.3 MDEQ was not aware of any studies or literature before 1971 identifying Aroclor 1242 as a potential environmental hazard, as persisting in the environment, or bioaccumulating. (MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 154:15-155:6 (TX 346).)

(5) During the Production Period, it Was Unknown Whether Low Levels of PCBs Detected in the Environment Constituted a Health Hazard

332. During the Production Period there was no data regarding effects of environmental exposure of Aroclor 1242 on any species, and extrapolation from high-dosage effects would not be warranted. (Guengerich R. (01/30/2015) at 30 (TX 2443); Anderson R. (01/30/2015) at 28 (TX 2586).)

332.1 In 1969, investigators were unable to conclude that the death of birds in the Irish Sea was caused by PCBs. “We can say categorically on the evidence that is available at the moment it would be quite wrong to assume that PCBs were the cause of deaths to those birds. The evidence just is not available.” (TX 11500 at -699-700.)

332.2 The studies at the end of the Production Period that did look into potential effects of environmental exposure concluded that PCBs would not cause harmful effects at such levels in the animals studied. (TX 11505 at -978.)

332.3 Although most of the toxicity data available on PCBs in the 1954 to 1971 timeframe was primarily at high doses in workers or in laboratory animal experiments, low dose effects of PCBs would not have been inferred from knowledge of high dose effects at the time. The scientific and regulatory views at the time recognized thresholds for effects such that low doses were believed to be without harm. (TX 11709.)

333. During the Production Period, the identification of PCBs in environmental samples did not indicate what risks PCBs posed to biological organisms at low levels of environmental exposure.

333.1 During the Production Period, no studies suggested PCBs were potential carcinogens or potential human carcinogens at environmental exposures. (Guengerich R. (01/30/2015) at 26 (TX 2443).)

333.2 In December 1966, a colleague of Dr. Jensen wrote to Monsanto “At present we have no knowledge of the biological significance of the presence of these compounds in living organisms.” (TX 11542.)

333.3 A 1966 article summarizing Jensen’s detection of PCBs stated that “it is not known at present how much of this substance is dangerous.” (TX 1457 at -968.)

333.4 In 1969, Dr. Jensen wrote, “[l]ittle is known about the toxicity of PCB in the levels found by us.” (TX 3578 at -169).)

333.5 In October 1971, Newsweek published an article concluding with the lack of knowledge about potential PCB harm. “‘I hate to say this,’ said one FDA scientist later in private, ‘but PCB is everywhere. And we really don’t know if we should—or should not—be alarmed.’” (TX 11697).)

333.6 In December 1971, TIME published an article stating that there was no proof PCBs were harmful at the levels found in the environment. “For all the grim

warning signs, there is as yet no proof that PCBs at present low levels found are harmful to humans.” (TX 1612.)

333.7 In May 1972, the Federal Task Force issued its findings in a report entitled “Polychlorinated Biphenyls and the Environment”. (TX 3570.) Concluding, among other things, that “[t]here currently are no toxicological or ecological data available to indicate that the levels of PCBs currently known to be in the environment constitute a threat to human health.” (TX 3570 at -282.)

333.8 In 1975 a representative of the U.S. Fish and Wildlife Service concluded that “ecological effects are poorly understood, as is the longterm impact of PCB on animal populations.” (TX 11718 at -168.)

334. It was only in 1972, after the Production Period, that evidence was published indicating that toxic effects could be induced by chronic exposure to environmental concentrations of PCBs in certain species. (TX 11701.)

(6) During and After the Production Period, Monsanto Assured its Customers, the Government, and the Public that Aroclor 1242 was not an Environmental Hazard

335. In July 1969, Monsanto told the New Jersey Department of Conservation “that [b]ased on available data, manufacturing and use experience, we do not believe the PCBs to be seriously toxic.” (TX 4995 at -765.)

336. In July 1969, Monsanto wrote a letter to the U.S. Department of Interior informing them about a study that showed low toxicity of Aroclor mixtures for fish. “The only published data on fish toxicity of which we are aware is a March, 1957 report from the Fish and Wildlife Service. This report resulted from a study of more than 4,000 chemicals to larval lampreys and fishes. The enclosed Xerox copy of the title page of the report, the explanation of the table and the tabulated results indicate that the four Aroclor compound [sic] investigated showed no effect at 5 ppm in the abbreviated experiment of 24 hours.” (TX 4832 at -488.)

337. In September 1969, Monsanto formed an “ad hoc” committee to address the PCB issue. At its first meeting, the Committee laid out its objectives, which included the development of recommended actions that would “permit continued sales and profits of Aroclors and Terphenyls”; “permit continued development of new uses and sales”; and “protect the image of Organic Division and of the Corporation”. (TX 11501 at -811.)

338. In December 1969, NCR met with Monsanto. Monsanto informed NCR that certain newspaper and journal articles “cleared PCB’s” and, with respect to Aroclor 1242, that “none [had been] found to date in environment—we think it degrades”. (TX 11843 at -595.)

339. In December 1969, Monsanto informed MDNR that PCBs with chlorine content of less than 54% were not found in the environment and were “not considered a general environmental contaminant”. (Hesse 9/25/2014 Dep. Tr. at 113:25-114:7; 123:10-124:14 (TX 363).)

340. In December 1969, Monsanto sent a letter to its Japan subsidiary stating that Monsanto's biodegradation program was underway and "we are optimistic that Aroclor 1242 will be acceptable." (TX 4817 at -965.)

341. In February 1970, Monsanto sent a letter to its Aroclor 1254 and 1260 customers alerting them to publicity about PCBs in the environment. In the letter Monsanto stated that "PCBs with a chlorine content of less than 54% have not been found . . . and appear to present no potential problem to the environment". (TX 11098; 11094; TX 1556.)

341.1 There is no evidence that Monsanto sent similar letters to its customers discussing the potential presence of Aroclor 1242 or Aroclor 1248 in the environment at this time. (Williams R. (12/03/2014) at 30 (TX 2580).)

342. In April 1970, Monsanto issued a press release stating that Monsanto's PCB research program, "confirmed by others, found only the higher chlorinated materials. At the same time, Monsanto undertook animal feeding studies which show PCB is not a highly toxic material." (TX 3569 at -243.)

343. In April 1970, Monsanto sent a letter to Congressman William Ryan in which Monsanto stated that "[s]cientific evidence indicates that only the higher chlorinated biphenyls—those containing more than 54 percent chlorine—are being found in the environment". (TX 1536 at -271.)

344. In May 1970, in a letter responding to a customers' inquiry about purchasing a Monsanto product that contained Aroclor 1242, Monsanto distinguished between the higher-chlorinated Aroclors and 1242, which Monsanto stated, "has not been indited [sic] as an environmental contaminant". (TX 3585.)

344.1 As of this time, MDNR had not published any research contradicting Monsanto's position that Aroclor 1242 was not found to be an environmental contaminant. (Hesse 9/25/2014 Dep. Tr. at 115:16-20 TX 363.)

345. A May 28, 1970, Monsanto summary of a discussion with a newspaper writer reflects Monsanto's position at that time: "only a limited number of the Aroclor range can be classified as PCB's and not all of these have been found in the environment". (TX 11576.)

346. As of September 1970, there was no consensus within Monsanto that all Aroclors were harmful, and Monsanto employees considered Aroclor 1242 to be "an okay product". (Gossage 11/7/2014 Dep. Tr. at 18-21; 29-30 (TX 358).) Monsanto believed that Aroclor 1242 degraded and that only 1254 and 1260 were being found in the environment. (Gossage 11/7/2014 Dep. Tr. at 121-123 (TX 358).)

346.1 During the Production Period, Monsanto's Research Department felt strongly that the lower chlorinated PCB mixtures posed no environmental problem. They had the "attitude that this will pass and let's . . . just limit this to the higher chlorinations." (Gossage 11/7/2014 Dep. Tr. at 26:15-17 (TX 358).)

346.2 During the Production Period, Monsanto's sales force did not believe lower chlorinated PCB mixtures, such as Aroclor 1242, posed an environmental problem. The sales force believed "strongly that this was wrong, that it wasn't a problem." (Gossage 11/7/2014 Dep. Tr. at 26:17-21 (TX 358).)

347. In February 1971, Monsanto sent a letter to Aroclor 1254 and 1260 customers, stating "the PCBs found strongly resembled chlorinated biphenyls containing 54% and 60% chlorine by weight". The letter advised that certain hydraulic fluids, which were "formulated with polychlorinated biphenyl", were to be replaced with new formulations, which Monsanto claimed "do not contain polychlorinated biphenyls" though they did contain Aroclor 1242. (TX 11100.)

348. After the Production Period, Monsanto's business group for Aroclors still believed the sale of Aroclor 1242 on its own would not have constituted an environmental hazard. "That was the position of that business group, that if they could have limited the products to 1242, that there never would have been an issue. That was their belief at that time." (Gossage 11/7/2014 Dep. Tr. at 28:14-29:12 (TX 358).)

349. In a July 14, 1972, letter to the U.S. Department of Health, Education and Welfare, Monsanto stated that "[r]ecently it has been established that many PCBs are biodegradable, particularly the monochloro, dichloro and trichloro, with evidence that some of the tetrachloro and pentachloro also degrade". (TX 11099 at -153.)

350. In August 1975 at a hearing before the Wisconsin Department of Natural Resources ("WDNR") about PCBs, Monsanto's representative William Papageorge told the government that "if we could just turn the clock back and only use let's say [Aroclor] 1221, a 1232 and even a 1242 and no others, we probably wouldn't be sitting in this room today. I just don't think a problem would have developed". (TX 3572 at -962.) The paper industry echoed that sentiment, with the representatives of the Wisconsin Paper Council and numerous individual paper companies opposing strict limitations on PCB discharges on the ground that Aroclor 1242 was not being found in the environment, was not being found to bioaccumulate in fish or wildlife, and was believed to degrade. (TX 3572 at 975-78.)

(7) NCR Ceased Using Aroclor 1242 in April 1971, Before it Was Found To Be an Environmental Hazard

351. After significant research effort, NCR identified and selected a substitute for Aroclor 1242 in NCR Paper by summer 1970, before the scientific community, the government, Monsanto, or NCR understood that Aroclor 1242 persisted in the environment. (Williams R. (12/03/2014) at 42 (TX 2580).)

352. The weight of evidence attesting to the adverse effects of Aroclor 1242 on the environment did not warrant action until after the decision to replace Aroclor 1242 had already been made and the substitution was completed. (Anderson R. (01/30/2015) at 2 (TX 2586).)

353. NCR first considered finding a potential replacement for Aroclor 1242 in the mid-1960s timeframe due to various business concerns. (McIntosh 06/12/2007 Dep. Tr. at 78, 81 (TX 83).)

354. In 1970, increasing visibility of the PCB issue and the widespread identification of higher chlorinated Aroclors in fish and wildlife prompted NCR to remove substances such as Aroclor 1242 from its manufacturing process. (Williams R. (12/03/2014) at 49 n.138 (TX 2580).)

354.1 A February 1970 internal Monsanto memorandum confirms that NCR management was committed to a change to a different solvent for reasons independent of the continuing efforts to better understand the PCB issue. “[R]egardless of the status of Aroclor 1242 and environmental pollution, NCR management is committed to change to a different solvent.” (TX 11902 at -916.)

354.2 A March 1970 internal Monsanto memorandum states that “The NCR people, both in the U.S. and U.K. have been looking for a substitute for Aroclor 1242 for several reasons. The PCB threat has accelerated this desire to convert.” (TX 11575 at -560.)

355. Throughout early 1970, NCR continued to work with Monsanto to explore whether MIPB and/or HB-40 would meet product needs as a substitute for Aroclor 1242, deciding by April 1970 that NCR wanted to move as rapidly as possible to make the switch to MIPB in the U.S. (TX 11906; TX 11903; TX 11901.)

356. By April 1970, NCR had approached Monsanto and emphasized that NCR wanted to move quickly to replace Aroclor 1242. “NCR indicated that they have >95% confidence level that MIPB of either pure grade, Sample No. 2 or Sample No. 4 will be the solvent to replace Aroclor 1242. They also indicated that it is imperative that they make this change as rapidly as possible.” (TX 11900.)

357. In October or November of 1970, NCR met with Monsanto and communicated that NCR would withdraw from the CCP business unless Monsanto came up with an alternative to Aroclor 1242 on a “timely basis”. (Gossage 11/7/2014 Dep. Tr. at 35:13-36:13, 36:18-38:15 (TX 358).)

357.1 According to former Monsanto executive Thomas Gossage, NCR was the only purchaser of its PCBs “taking a strong leadership position in getting [PCBs] out of their downstream products”. (Gossage 11/7/2014 Dep. Tr. at 43:7-44:25 (TX 358).)

358. NCR performed all activities to verify the suitability and safety of the substitute chemical and fully switched its CCP product line out of Aroclor 1242 in April 1971. (Williams R. (12/03/2014) at 42-43 (TX 2580).)

358.1 Monsanto performed biodegradation tests on MIPB while NCR performed toxicological and sensitization tests on CCP made with MIPB. (TX 11485; TX 11621; TX 11623.)

359. Once MIPB (“Mono Isopropyl Biphenyl”) was identified as a replacement, NCR did not delay replacing Aroclor 1242, despite MIPB’s higher cost and lesser performance. (Gossage 11/7/2014 Dep. Tr. at 40:3-24 (TX 358).)

359.1 By the fourth quarter of 1970, NCR had started phasing in NCR Paper made with MIPB commensurate with available supplies. (TX 1594 at -079.)

359.2 The use of PCBs in all NCR capsules manufactured for use in NCR Paper was terminated on Mar 25, 1971. (TX 11083 at -356.)

359.3 All manufacturers of NCR CCP discontinued the use of PCB in their paper production on April 1, 1971. (TX 4716.)

360. NCR had limited its purchase of Aroclor 1242 from the time it began its accelerated effort to substitute MIPB for Aroclor 1242. Therefore, NCR did not have a significant inventory of Aroclor 1242 on hand when it completed its shift to MIPB-containing CCP in April 1971. The small Aroclor 1242 inventory NCR had was returned to Monsanto. (TX 11488.)

361. Monsanto, as well as virtually all foreign manufacturers of PCBs, continued to manufacture and sell lower-chlorinated PCBs after April 1971. (TX 11095 at -575.)

361.1 Monsanto's Aroclor sales hit record highs in 1970 across a variety of Aroclors and a variety of industrial applications. (TX 2988.)

361.2 Monsanto continued to manufacture and sell certain hydraulic fluids containing Aroclor 1242 and certain heat transfer fluids during 1971 and 1972. (Williams R. (12/03/2014) at 58 (TX 2580).)

(8) Use of PCBs Was not Banned Until After the Production Period

362. There was no guidance from the FDA regarding PCBs during the Production Period. (Anderson R. (01/30/2015) at 54 (TX 2586).)

363. The 1968 water quality criteria for marine and freshwater organisms published by the Federal Water Pollution Control Administration (FWPCA) did not include any discussion of PCBs. (TX 12092.)

364. The U.S. Government established PCB guidelines in 1972.

364.1 The 1972 PCB guidelines emphasized that all entities discharging PCBs in wastewater were expected to reduce the discharge.

364.2 In March 1972, the FDA published a proposed rule on food tolerances. (TX 11636.)

364.3 In April 1972, the EPA emphasized the importance of keeping new PCBs from entering the water environment. "It is the policy of the EPA that all discharges to the aquatic environment involving PCBs be restricted to the lowest possible level." (TX 11567 at -826.)

365. In December 1975, EPA stated that it lacked sufficient chronic health effects information to establish maximum contaminant levels for PCBs in drinking water. (TX 11639 at -508.)

366. In 1976, Michigan passed laws regulating the concentration of PCBs in the disposal of waste. “Beginning July 1, 1976, a person shall not dispose of solid or liquid waste resulting from the use in his business of PCB or an item, product, or material containing or which has contained a concentration equal to or greater than 100 ppm of PCB except in conformity with rules promulgated by the director.” (M.C.L.A. 299.358 (1976).)

367. The United States did not ban the manufacture or importation of PCBs until 1979; about eight years after NCR ceased using Aroclor 1242 in CCP. (TX 3484.) The EPA’s ban specifically exempted CCP from continued use. (TX 3484 at -535.) (“[t]he amount of PCB on each sheet of carbonless copy paper is extremely small. In view of these practical considerations and because the potential PCB exposure and risks to human health or the environment are negligible, EPA has concluded that this activity does not present an unreasonable risk and is authorizing the continued use of existing PCB carbonless copy paper.”)

(9) The Properties and Effects of DDT Did Not Indicate that PCBs Were Environmentally Harmful

368. Obvious differences in properties, uses, releases, and effects would have made it unlikely and erroneous to infer harm from PCB-use based on the observations of DDT and no scientific researcher did so. (Anderson R. (01/30/2015) at 52 (TX 2586).)

369. PCBs and DDT have different physical, chemical, and toxicological properties. (Guengerich R. (01/30/2015) at 58 (TX 2443).)

369.1 DDT is more acutely toxic than PCBs to mammals, birds, fish, and insects. (TX 4820 at -899; TX 11702 at -044; TX 11729 at -047; TX 11731 at -822; TX 11727 at -454; TX 11726 at -370; TX 3570 at -411.)

369.2 During the Production Period, it was known that DDT was a potent insecticide, caused eggshell thinning, and was lethal to fish. At that time, neither PCBs generally nor specific PCB congeners such as those in Aroclor 1242 were known to have those effects. (Guengerich R. (01/30/2015) at 60 (TX 2443).)

369.3 Unlike PCBs, DDT was a broad spectrum pesticide with the distinction of being “for many years one of the most widely used pesticide chemicals in the United States.” (TX 11724; TX 11729.)

369.4 DDT was known to cause eggshell thinning in raptors, but when the same studies were replicated using PCBs at the end of the Production Period, the conclusion was that PCBs do not cause eggshell thinning in birds. (TX 11505.)

369.5 Unlike DDT, PCBs do not cause any neurological effects or tremors, and this was known during the Production Period. (Guengerich R. (01/30/2015) at 59 (TX 2443).)

369.6 DDT is structurally different from PCBs. (Guengerich R. (01/30/2015) at 60 (TX 2443); Anderson R. (01/30/2015) at 44 (TX 2586).)

370. DDT was banned in 1972, after the Production Period. Until that time, DDT was applied directly to the environment in very large quantities. (TX 12499.) (Anderson R. (01/30/2015) at 55 (TX 2586).)

(10) NCR Did not Conceal that CCP Contained PCBs

371. The fact that CCP contained a PCB compound was knowable and in fact known to the paper industry. (TX 4820 at -901; TX 11839; TX 11840; TX 1776; TX 11592; TX 2215; TX 4846.)

372. NCR disclosed its use of PCBs in numerous patents filed and published before and throughout the Production Period. (TX 4860 at -646; TX 3588; TX 4721 at -062; TX 4717; TX 3588.)

373. NCR's patents were well-known in the paper industry prior to 1970.

373.1 As Tom Busch, the retired CEO of Appleton Papers Inc., wrote in 1986 "[d]uring the 1950s, the world learned of this promising NCR product through more than 150 U.S. and foreign patent awards to NCR, discussions among suppliers of materials and the business form printers, and NCR authorized carbonless coaters, Mead and Appleton." (TX 1038 at -254-255.)

373.2 St. Regis negotiated an agreement to license NCR's encapsulation patents in December 1964. (TX 11743.)

373.3 In January 1967, IP visited NCR for an overview of NCR paper and the encapsulation process. (TX 11834, TX 11833.)

373.4 IP patented a "method of coating paper" in March 1967. (TX 12339.)

373.5 Several paper companies, including Allied in Kalamazoo in 1967, sought to create their own CCP products and studied NCR's patents. (TX 4877 at -772-73.)

373.6 Allied received a shipment of Aroclor 1242 from Monsanto. (TX 11087; TX 11088.)

373.7 As of 1970, Monsanto was supplying Champion Paper with 0.5 to 1.0 million pounds annually of Aroclor 1248 to use in its newly developed carbonless copy paper. (TX 11566; TX 4774 at -611-612.)

373.8 Monsanto was also in communication with Mead Paper about supplying Mead with Aroclor 1242 for its own project to introduce a Mead CCP. (TX 11538; TX 11489.)

373.9 NCR licensed and crosslicensed its CCP patents to a variety of paper companies, including Great Northern Nekoosa Corporation, Mead Corporation and Champion International Corporation. (TX 4733.)

374. In March 1957, NCR sent a letter to the New York State Department of Labor stating that Aroclor 1242 was a component of NCR Paper. (TX 12498.)

375. That NCR CCP contained PCBs was discussed in articles generally read by the paper industry.

375.1 A 1964 technical reference regularly used in the paper industry, called the Encyclopedia of Chemical Technology (the “Encyclopedia”), discussed the use of PCBs in NCR CCP. (*See, e.g.*, TX 4846 at -715; TX 4925; TX 4990.)

375.2 The Encyclopedia contained a chapter concerning PCBs, which disclosed that “[c]arbonless reproducing paper is made by an encapsulation procedure which uses chlorinated biphenyls as part of the formulation” and referenced a patent held by “National Cash Register Co.” (TX 4846 at -715.)

375.3 The Encyclopedia contained a chapter discussing encapsulation, which was written by an NCR employee and discussed the use of PCBs in capsular products. (TX 4718 at -951; 5/11/07 James Herbig Dep. Tr. at 27:13-28:12 (TX 233).) That chapter discussed the use of encapsulation to manufacture CCP and referenced NCR patents, which further discussed the use of PCBs in CCP. (TX 4718 at -956.)

375.4 NCR provided the Encyclopedia encapsulation chapter to potential customers. (*See, e.g.*, TX 11845.)

375.5 In early 1970, an article in Environment magazine stated that PCBs had a variety of uses including uses that should have put mills on notice such as printer’s ink, coatings for paper and fabric, and many kinds of adhesives and resins. (TX 2231.)

375.6 In October 1970, an article published by Dr. Carl Gustafson, Federal Water Quality Administration, identified PCBs in CCP. (TX 4199 at-784.)

375.7 Mead Paper Company cited the Gustafson article in its May 5, 1972, comment submission to the FDA, demonstrating that this document was well known to the paper industry. (TX 11603 at -215.)

375.8 In December 1971 at a well attended government-sponsored PCB meeting, a paper was presented entitled “PCBs and the Paper Industry—a Progress Report.” That paper noted that the history of PCBs in paperboard goes back somewhat over a year when two paper companies learned about the presence of PCBs in folding cartons from the Grocery Manufacturers Association. (TX 11082 at -270.)

375.9 A paper presented to the Grocery Manufacturers of America, Inc., determined that “[t]he paper industry first became aware of the presence of [PCBs] in paper products approximately one year ago, in October, 1970.” (TX 11082 at -691.)

376. NCR coaters, partners and licensees like Crown Zellerbach, International Paper, S.D. Warren Company, CPM, Mead Paper Company, Appleton Coated Paper Company, Nekoosa-Edwards Paper Company, and Champion were fully aware that NCR Paper contained PCBs as early as the 1950s and 1960s. (TX 11614; TX 1068; TX 11611; TX 11614; Williams R. (12/3/2014) at 87 (TX 2580).)

376.1 In 1959, Kimberly Clark, the paper products company, corresponded with NCR about “chlorinated diphenyls”, another name for PCBs. (TX 11835; TX 2446.)

376.2 Many other companies, outside of the paper industry, similarly corresponded with NCR about the fact that PCBs were in CCP, further demonstrating that it was no secret that PCBs were in CCP. (TX 11829; TX 11839; TX 11741)

376.3 The components of NCR’s CCP was taught to paper science students. During an orientation to NCR paper, a representative of Mead Corporation educated paper science students at Miami University of Ohio on the contents of CCP, including PCBs. (McIntosh 04/07/2009 Dep. Tr. at 31:18-32:2 (TX 82).)

376.4 The Institute of Paper Chemistry, which itself knew of the presence of PCBs in CCP at least as early as 1955 (TX 1776), stated that “[t]he presence of PCBs in paper products and mill effluents has been recognized since the late 1960s”. (TX 11592 at -318.)

376.5 The Wisconsin Alumni Research Foundation was aware of the presence of PCBs in CCP by July 1970. (TX 4723.)

376.6 An article published in Environmental Science and Technology in October 1970 by an author who worked with PCBs in pulp and paper mill effluents noted that PCBs were contained in CCP. (TX 4199 at -784.)

376.7 In November 1971, ACPC published a newsletter, available to the public, which discussed the fact that “PCBs was discontinued when it was learned that PCBs may create environmental problems”. (TX 4970 at -486; TX 11006.)

376.8 The Coating Companies, which applied NCR’s emulsion, including Mead Paper Company, Appleton Coated Paper Company, and Nekoosa-Edwards Paper Company, were also fully aware that CCP contained PCBs as early as the 1950s and 1960s. (TX 1776.)

377. Trade Associations further disseminated this information to their members, including mills on the Kalamazoo River.

377.1 Representatives of Brown Company, Georgia-Pacific Corporation, IP, Mead Corporation, Michigan Carton Company, St. Regis Paper and Weyerhaeuser were members of the board of directors of API’s Paperboard Group in 1968. (TX 4687).) The American Forest & Paper Association (formerly API) identified Georgia-Pacific LLC and IP as members of API in 1971. (TX 4693; TX 4694.) In January 1971, API notified the

members of the paperboard division that CCP should not be used in making combination paperboard for food packaging. (TX 1603.)

377.2 Thomas Daly, who worked in technical services for Michigan Carton Company from 1966 to 1974, recalled learning that certain grades of wastepaper contained PCBs in “the very late 60s or early 70s”. (Daly 08/26/2014 Dep. Tr. at 29:8-33:21 (TX 353.)) Daly confirmed that members of the paperboard packaging industry became aware of PCBs around September 1970. (Daly 08/26/2014 Dep. Tr. at 134:3-16 (TX 353; TX 4156.))

377.3 GP’s Sutherland Mill, as well as other mills, was a member of the Boxboard Research & Development Association (the “BRDA”), a Kalamazoo trade organization. (Bennett 10/5/2014 Dep. Tr. at 106-107 (TX 342; TX 4156.))

377.4 Information concerning PCBs was shared at BRDA meetings, and PCBs were a “hot topic among any recycle board mill”. (Daly 8/26/14 Dep. Tr. at 38:18-39:8; 126:20-127:13 (TX 353.))

377.5 The BRDA stated that it was aware of PCBs in NCR CCP and that PCBs may be an environmental concern, as early as September 1970. (TX 4225.))

377.6 In January 12, 1971, American Paper Institute notified the members of the Combination Paperboard Division of the use of PCBs as a dye carrier in NCR Paper. (TX 1603.))

377.7 The paper industry also knew that PCBs were also in other feedstock like newspapers. (TX 2444 at -777; TX 11515 at -958; TX 11531 at -355.))

378. By the 1960s, other companies were also involved in development of copy papers to compete with NCR’s offering and those entities would reasonably have known of the presence of PCBs in the NCR Paper given the public nature of the NCR patents. (TX 11836; TX 1149; (TX 11537; TX 11525; TX 11681 at -980; TX 11523.))

378.1 As early as 1968, Allied Paper Corporation was experimenting to develop its own form of CCP using PCBs. (TX 4877 at -772-3; Williams R. (12/3/2014) at 88 (TX 2580.))

378.2 The early Allied Paper Corporation knowledge of PCB use in CCP (late 1960s) strongly suggests that Allied knew of PCBs in NCR broke. (Williams R. (12/6/2014) at 88 (TX 2580); TX 250 at 31-45; TX 88 at 78-80, 279-281.))

379. Kimberly Clark, another paper company, also knew that PCBs were in NCR CCP. (TX 4999; TX 2446; TX 11835.))

380. An article in Environment magazine, a general audience environmental publication, stated that PCBs had a variety of uses including uses in printer’s ink, coatings for paper and fabric, and many kinds of adhesives and resins. (TX 2231.))

F. The Kalamazoo Mills Discharged all of the CCP-related PCBs at the Site

381. The Kalamazoo Mills are responsible for contamination at the Site because (i) the Kalamazoo Mills discharged all the PCBs resulting from recycling operations using CCP as a furnish and (ii) the Kalamazoo Mills released PCBs from sources other than PCBs.

(1) The Kalamazoo Mills Discharged All the PCBs that Were Released to the Site as a Result of Recycling CCP

382. All of the Aroclor 1242 at the Site that came from one of the 14 Kalamazoo Mills, none of which was owned by NCR.

383. The Mill Parties owned and/or operated mills at or near the Site.

383.1 GP acquired KPC in July 1967. (GP Resp. to IP's Third Set of Interrogs., dated Apr. 14, 2014, at 77 (TX 12358 at 77.)

383.2 GP is a successor to companies that owned and operated the Sutherland Mill and KVP Mill. (GP Resp. to IP's Third Set of Interrogs., dated Apr. 14, 2014, at 78-79 (TX 12358 at 78-79.)

383.3 GP purchased the Hawthorne Mill in 1978. (TX 11107 at -367.)

383.4 IP is the successor by merger to the St. Regis Paper Company. (Phase I PTO at 9, ¶ 2.)

383.5 St. Regis owned the Bryant Mill from 1946 until 1966. (Phase I PTO at 9, ¶ 3; Phase I Opinion at 5.) St. Regis operated the Bryant Mill from 1946 until June 30, 1956. (Phase I PTO at 9, ¶ 8; Phase I Opinion at 5.) And St. Regis was the previous owner of the mills located on Fountain Street and Angell Street. (TX 11787 at -231.)

383.6 IP is a successor to the MacSimBar Mill. Hoerner-Waldorf Corporation ("Hoerner-Waldorf") assumed control of MacSimBar in 1966-1968 and merged with Champion International Corporation, which in 1976, was merged into IP. (TX 11122 at -307; IP Supp. Resp. to GP's First Phase II RFAs, dated July 25, 2014, (TX 12413 at 2.)

384. All of the parties have retained experts to estimate the discharges of Aroclor 1242 from the Kalamazoo Mills. Because the experts used varying methodologies, they reached different conclusions about how much Aroclor 1242 each Mill discharged.

385. Although the parties' experts have put forward varying estimates of the total contributions of Aroclor 1242 by each mill, the experts generally agree on the Mills' relative contributions. All the experts agree that the KPC Mill, the King Mill and the Bryant Mill were the principal dischargers of Aroclor 1242 at the Site. The Kalamazoo Mills are estimated by experts in this litigation to have discharged the following relative amounts of Aroclor 1242 into Kalamazoo River and Portage Creek:

Estimated PCB Discharges By Mill

Mill	Party	NCR (Allen)	WeyCo (Werner)	GP (Wolfe)	IP (Woodard)	All Experts			
		% Total PCBs	% Total TSS	% Total PCBs	Relative Ranking	Range	Averages		
KPC	GP	42%	45.2%	23%	Largest	23-42%	36.7%	89.6%	
King	—	27%	18.2%	23%	Higher Level	18.2-27%	22.9%		
Bryant	IP	20%	28.7%	41%	Higher Level	20-41%	30.0%		
Sutherland	GP	3%	0.6%	1.0%	Mid-Level	0.6-3%	1.5%	7.7%	
Rex	—	3%	0.5%	7%	Mid-Level	0.5-6%	3.4%		
Hamilton	WeyCo	1.9%	2.2%	4%	Mid-Level	2.2-5%	2.7%		
Monarch	—	1.2%	4.2%	With Bryant	Lower Level	1.2-4.7%	2.7%	<4%	
Otsego-Menasha	—	0.5%	0.1%	Excluded	Smallest	0.1-0.5%	0.3%		
Mac Sim Bar	IP	0.4%	0.2%	0.0%	Lower Level	0.2-0.4%	0.3%		
Hawthorne	GP	0.2%	<0.1%	Excluded	Smallest	<0.1-0.2%	<0.2%		
Fountain Street	IP	0.1%	Excluded		Excluded	Excluded	0.1%		0.1%
Angell Street	IP	0.1%					0.1%		0.1%
Nat'l Gypsum	—	0.1%	<0.1%		Lower Level	<0.1-0.1%	<0.1%		
Plant 11	GP	0.0%	0.2%		With Sutherland	0-0.2%	0.1%		
KVP	GP	0.0%	<0.2%	0.0%	Smallest	0-<0.2%	<0.1%		
Total		100%	100%	100%			<101.2%	<101.3%	

(Allen Supp. R. (2/27/2015) at 3 (TX 2537); Wolfe Supp. R. (7/24/2015) at 6 (TX 155); Werner Suppl. R. (8/14/2015) at Attach. (TX 122); *see* Addendum C for annual data estimated by Dr. Allen.)

386. GP owned and/or operated the KPC, Sutherland, Hawthorne, and KVP mills. (GP Resps. to IP's Third Set Interrogs., dated Apr. 14, 2014, at 77-79 (TX 12358 at 77-79; TX 11107 at -367.) Their shares of PCBs discharged have been estimated as follows:

Mill	NCR (Allen)	WeyCo (Werner)	GP (Wolfe)	IP (Woodard)	All Experts	
	% Total PCBs	% Total TSS	% Total PCBs	Relative Ranking	Range	Averages
KPC	42%	38.2%	25%	Largest	25-42%	34.9%
Sutherland	3%	0.7%	1.5%	Mid-Level	0.7-3%	1.8%
Hawthorne	0.2%	<0.1%	Excluded	Smallest	<0.1-0.2%	<0.2%
KVP	0.0%	0.2%	0.1%	Smallest	0-0.2%	0.1%

387. IP is the successor to entities that owned the Bryant Mill, Fountain Street Mill, Angell Street Mill, and MacSimBar Mill. (Phase I PTO at 9, ¶ 3; TX 11787 at -231; TX 11122 at -307; IP Supp. Resps. to GP's First Phase II RFAs, dated Jul. 25, 2014 (TX 12413 at 2.) Their share of PCBs discharged has been estimated as follows:

Mill	NCR (Allen)	WeyCo (Werner)	GP (Wolfe)	IP (Woodard)	All Experts	
	% Total PCBs	% Total TSS	% Total PCBs	Relative Ranking	Range	Averages
Bryant	20%	33.8%	44%	Higher Level	20-44%	32.8%
Mac Sim Bar	0.4%	0.2%	0.1%	Lower Level	0.2-0.4%	0.3%
Fountain Street	0.1%	Excluded		Excluded	0.1%	0.1%
Angell Street	0.1%				0.1%	0.1%

388. Weyerhaeuser owned the Plainwell Mill. (Stip. and Order, dated Feb. 8, 2013 (Dkt. No. 369) ¶ 1; TX 4251 at -741.) Its share of PCBs discharged has been estimated as follows:

Mill	Party	NCR (Allen)	WeyCo (Werner)	GP (Wolfe)	IP (Woodard)	All Experts	
		% Total PCBs	% Total TSS	% Total PCBs	Relative Ranking	Range	Average
Hamilton	WeyCo	1.9%	1.9%	5%	Mid-Level	1.9-5%	2.8%

389. NCR did not own or operate any Kalamazoo Mill, and did not recycle any CCP or discharge any PCBs at the Site. (Phase I PTO at 3, ¶ 1.)

390. The Mill Parties declined to make specific estimates regarding Mill discharges during discovery and thus foreclosed themselves from doing so at trial. (*See, e.g.*, NCR Corp.'s Mem. in Support of Its Mot. to Strike Certain of the Expert Testimony Provided by Georgia-Pacific (Dkt. No. 702), at 6.)

(2) The Mills Released PCBs from Sources Other than CCP

391. Aroclor 1254 and 1260 make up 25% of the PCBs in the sediments in the Kalamazoo River between Morrow Lake and Allegan Dam and in the former impoundment areas. (*KRSB v. Eaton Corp.*, 258 F. Supp. 2d 736, 741 (W.D. Mich. 2002); TX 11387 at -646.)

392. Sampling data from OU5 of the Site show a significant presence of Aroclors other than 1242. (*See* Barrick R. (12/5/2014) at 25 (TX 164); TX 11800 at -195-98, -233-39; TX 4741 at -391-93, -417-26; TX 4745 at -582-88, 621-28; TX 5466 at -611-15, -698-715; TX 11799 at -036-39, -095-104; TX 5449 at -908-14.)

392.1 In 1,885 samples collected from the Kalamazoo River, Portage Creek and Lake Allegan, Aroclor 1254 was detected in 33% of the samples. (TX 11800 at -195-98, -233-39; TX 4741 at -391-93, -417-26; TX 4745 at -582-88, 621-28; TX 5466 at -611-15, -698-715; TX 11799 at -036-39, -095-104; TX 5449 at -908-14.)

392.2 In 1,885 samples collected from the Kalamazoo River, Portage Creek and Lake Allegan, Aroclor 1260 was detected in 7% of the samples. (TX 11800 at -195-98, -233-39; TX 4741 at -391-93, -417-26; TX 4745 at -582-88, 621-28; TX 5466 at -611-15, -698-715; TX 11799 at -036-39, -095-104; TX 5449 at -908-14.)

392.3 The Mill Parties declined to make specific estimates regarding mill discharge during discovery and thus foreclosed themselves from doing so at trial. (GP's Answers and Objections to NCR's Interrogs., July 8, 2014, at 21 (TX 4724); IP's Resp. to NCR's Interrogs., July 7, 2014, at 23 (TX 1238 IP Suppl. Resis to Certain of NCR's Interrogs Oct. 13, 2014 (TX 12432); IP's Further Suppl. and Rest. Resps. to Certain of NCR's Interrogs, Dec. 2, 2014, at 22-23 (TX 12440); Weyerhaeuser's Answers and Objs. to NCR Interrogs, June 23, 2014, at 11 (TX 12362).)

392.4 In 1,885 samples collected from the Kalamazoo River, Portage Creek and Lake Allegan, Aroclor 1248 was detected in 19% of the samples. (TX 11800 at -195-98, -233-39; TX 4741 at -391-93, -417-26; TX 4745 at -582-88, 621-28; TX 5466 at -611-15, -698-715; TX 11799 at -036-39, -095-104; TX 5449 at -908-14.) Weathered Aroclor 1254 may have been misidentified as Aroclor 1248. (Barrick R. (12/5/2014) at 25 (TX 164).)

392.5 In 1,885 samples collected from the Kalamazoo River, Portage Creek and Lake Allegan, Aroclor 1016 was detected in 0.16% of the samples. (TX 11800 at -195-98, -233-39; TX 4741 at -391-93, -417-26; TX 4745 at -582-88, 621-28; TX 5466 at -611-15, -698-715; TX 11800 at -036-39, -095-104; TX 5449 at -908-14.)

392.6 In 1,885 samples collected from the Kalamazoo River, Portage Creek and Lake Allegan, Aroclor 1221 was detected in 0.85% of the samples. (TX 11800 at -195-98, -233-39; TX 4741 at -391-93, -417-26; TX 4745 at -582-88, 621-28; (TX 5466 at -611-15, -698-715; TX 11799 at -036-39, -095-104; TX 5449 at -908-14.)

392.7 In 1,885 samples collected from the Kalamazoo River, Portage Creek and Lake Allegan, Aroclor 1232 was detected in 0.52% of the samples. (TX 11800 at -195-98, -233-39; TX 4741 at -391-93, -417-26; TX 4745 at -582-88, -621-28; TX 5466 at -611-15, -698-715); TX 11799 at -036-39, -095-104; TX 5449 at -908-14.)

393. The Kalamazoo Mills released PCBs other than Aroclor 1242 to the Site.

393.1 PCBs other than Aroclor 1242 have been detected in samples from facilities and landfills used by the Kalamazoo Mills. (TX 11800; TX 5449.)

393.2 Electrical application discharges were a contributor of PCBs other than Aroclor 1242 at the Site. (MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 176:7-14 (TX 346).)

393.3 PCBs other than Aroclor 1242 were used as insulating and heat exchange fluids and hydraulic fluids, among other uses. (TX 4194 at 746; TX 11609; TX 4705; (TX 3571 at -325-31); (TX 3075).)

393.4 Allied used Aroclor 1254 for use in transformers and capacitors. (TX 4877 at -805.)

393.5 In May 1982, the EPA commenced a suit against Allied alleging PCB leakage from Allied's transformers. (TX 4877 at -807.) Additionally, several small leaks were uncovered by Allied later that year. (TX 4877 at -808.)

393.6 In the late 1970s, Plainwell's Hamilton Mill had had 5 PCB-containing transformers and 86 PCB-containing capacitors in use, and an additional 11 capacitors in storage. (TX 4251 at -814-16.)

393.7 As late as 1995, Plainwell's Hamilton Mill used PCB-containing hydraulic oils in some of its elevators. (TX 4251 at -814-16.)

393.8 Five of the MacSimBar Mill's seven transformers contained some level of PCBs. (TX 11122 at -356.)

393.9 The MacSimBar Mill utilized one PCB transformer containing 425 gallons of PCBs and 41 capacitors containing 77.9 gallons of PCBs. (TX 11122 at -355.)

393.10 In July 1976, an internal Mead memorandum noted that curbing around a PCB-containing transformer intended to prevent spills was not adequate. (TX 11122 at -355.)

393.11 There were 12 PCB-contaminated transformers at the KPC Mill. (TX 11107 at -487-88.)

393.12 As late as 1992, seven PCB transformers at the KPC Mill remained in service and contained a total of 3,280 gallons of fluid. (TX 11107 at -487-88.)

393.13 The Fountain Street Mill removed three PCB-containing transformers from the mill in 1991. (TX 11789 at -284.)

393.14 Aroclor 1254 was used in some inks. (TX 11609 at -726.)

393.15 Aroclor 4465 was used as a resin for compounding, marking, rotogravure and general printing inks. (TX 11609 at -726.)

393.16 The Sutherland Mill had five gravure presses. (TX 11391 at -064.)

393.17 GP argued in the KRSG litigation that "Aroclor 1254 . . . accounts for approximately half of the PCB found in fish at the site (TX 5715 at -038), and that "25% of the PCB mass in sediment is comprised of Aroclor 1254" (TX 113878 at -646). GP is estopped from arguing otherwise at trial in this litigation.

G. The Kalamazoo Mills Knowingly Polluted the Kalamazoo River

394. For decades, the Kalamazoo Mills knowingly polluted the Kalamazoo River (i) in violation of government orders restricting paper mill discharges, (ii) while resisting implementation of secondary wastewater treatment, (iii) while routinely bypassing implemented wastewater treatments, (iv) with knowledge that their effluent could result in harm to water bodies, and (v) despite being told by MDNR that their effluent was releasing PCBs into the Kalamazoo River

395. Paper mills along the Kalamazoo River discharged enormous amounts of waste into the Kalamazoo River and Portage Creek that included contaminants, solid loads, biological oxygen demand (“BOD”), and PCBs. (MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 46:13-19; 47:14-16; 47:22-48:24 (TX 346); Tx. 4194 at -746; TX 4349 at 17.)

395.1 The Kalamazoo Mills discharged wastes directly into the Kalamazoo River. (Chadderdon 10/30/2014 Dep. Tr. at 32:10-13, 32:10-14, 33:3-5 (TX 349) (noting that KVP discharged wastewater directly into the river from 1946 until 1972).)

395.2 “On the Kalamazoo River, a large portion of the heavy pollution load resulted from the more than 600 tons of paperstock which was deinked daily in order to produce high quality printing and writing paper. In fact, in 1950, the three principal de-inking mills in the Kalamazoo accounted for 62% of the BOD discharged into the River”. (TX 4350 at 190; MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 55:18-56:7 (TX 349).)

395.3 The river gave off obnoxious odors during warm, dry spells, as a result of the paper mills’ pollution. (TX 11139 at -553.) The odors from the river were so strong that people living near the river were forced “to sleep with their windows closed on hot summer nights.” (TX 12503.)

395.4 Joseph Chadderdon, who worked at the KVP Mill from 1946 through 1985, testified that in the early 1950s, the Kalamazoo River “looked like an open sewer . . . there were paper mill fibers and filler that were discharged to the river, and except in the summer it looked just milky or white . . . and sometimes in the summer it would go anaerobic” and smelled like “[h]ydrogen sulfide”. (Chadderdon 10/30/2014 Dep. Tr. at 55:14-56:11 (TX 349).) According to Mr. Chadderdon, the river began improving when the Kalamazoo Mills directed their wastes to the city’s treatment plant. (Chadderdon 10/30/2014 Dep. Tr. at 56:21-23 (TX 349).)

395.5 In 1953, 4 acres of dead carp were photographed floating on the water surface as a result of fish swimming upstream out of the Kalamazoo River’s oxygen depleted water, described as “caused chiefly” by paper mill waste released into the river. (TX 4390; MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 50:25-53:19 (TX 346) (account consistent with MDEQ’s records).)

395.6 In the Kalamazoo River “there was much evidence of septic action. Gas eruptions from the water gave the appearance of splashes of raindrops all about. Chunks of sludge, varying in size up to that of a platter, were raised from the bottom of the gases [and] [t]he banks of the River were lined with a sludge composed of clay and organic matter.” (TX 4350 at 191 (internal quotation marks and alterations omitted); MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 57:15-58:20 (TX 346) (consistent with MDEQ information)).

395.7 James Pope, former Water Pollution Investigator for the Michigan Water Resources Commission, described the condition of the Kalamazoo River in 1962 as a “white-gray color” and “you could also see sludge bubbling up from the bottom as it

decomposed and released gases . . . visually it didn't look good". (Pope 10/8/2014 Dep. Tr. at 25:13-26:4 (TX 374).)

395.8 John Hesse, MDNR's former Toxic Substances Unit Supervisor, described the Kalamazoo River in 1965 as "by far the most contaminated river I had ever seen in my life up to then . . . Portage Creek was—was exceptionally contaminated at that time, and I think at one time I described the—the creek as—as being sort of like a blue—a blueberry milkshake but not quite as thick as—as a milkshake but that color, and it was—had a plume that went a considerable distance downstream where it discharged into the Kalamazoo River." (Hesse 9/25/2014 Dep. Tr. at 39:21-40:10 (TX 363).)

395.9 Allen Knight, a former professor of hydrobiology testified that the Kalamazoo River was the "most grossly polluted, with organic pollutants that [he had] ever seen in [his] career". (Knight 9/9/2014 Dep. Tr. at 71:21-25 (TX 367).)

395.10 Bruce Blakeman, who worked at the KVP Mill from 1963 through 2004, testified that "if I were light enough, I could walk across that river, and . . . not because of my religious beliefs but because of the scum that was on the river. It looked like Styrofoam floating down the river, and it stank, stunk, whatever the correct terminology is. . . . There used to be a point in time even when the scum was gone from the river, it still flowed like a – with a brown consistency, like a diluted chocolate milk". (Blakeman 10/23/2014 Dep. Tr. at 61:15-62:14 (TX 343).)

395.11 Jack Rynbrand, who grew up in the Kalamazoo area, testified that the Bryant Mill discharged into Portage Creek and that Creek's color "would depend what day you'd go by there. It would be red, some days green, some days kind of a nothing, some days kind of whitish". (Rynbrand 10/27/2014 Dep. Tr. at 50:9-24 (TX 376).)

395.12 Karl Zollner, a former regional engineer for MDNR, testified that there were instances reported at the Agency's sampling station between Parchment and Plainwell where "the hydrogen sulfite, when the oxygen levels got down to zero essentially in that stretch of the stream, were taking the paint off of people's homes". (Zollner 11/3/2014 Dep. Tr. at 225:6-14 (TX 379).)

395.13 Don Lacey, a former employee KPC employee, testified that deinking at the KPC Mill was causing a pollution problem, and that the Kalamazoo River had a pollution problem caused by paper mill recycling operations. (Lacey 11/11/2014 Dep. Tr. at 69:17-20; 70:6-17 (TX 368).)

395.14 The Kalamazoo River in the 1950s through the 1970s has been described as the most polluted river in Michigan, a river that paper recycling mills used as a "free sewer for the disposal of wastewater". (TX 4350 at 188; MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 53:24-54:15; 54:16-25 (TX 346) (account consistent with MDEQ records); (TX 4176 (Knight video).)

396. Wastes discharged by paper mills included a variety of wastes or contaminants. (Barrick R. (12/5/2015) at 12 (TX 164).)

396.1 Paper mill discharged often contain wood debris, ink, dyes, pigments, mineral fillers (e.g., clays, calcium carbonate), coating binders, baling wire, plastic, rocks, glass and paper clips, string, waxes, glue and related materials, and heavy metals. (Barrick R. (12/5/2014) at 9 (TX 164) (noting that cleanup actions in some mill areas removed stained soils under leaking PCB-containing transformers, as well as heavy metals (e.g., arsenic, mercury, lead) and polycyclic aromatic hydrocarbons present at concentrations exceeding Michigan Part 201 Generic Cleanup Criteria).)

396.2 Papermill processes use and ultimately dispose of corrosive bleaches, strong acids and bases (caustic), spent chlorinated solvents, oils, boiler fly ash, and coal used as a fuel, as well as generate toxic combustion byproducts such as polycyclic aromatic hydrocarbons. (Barrick R. (12/5/2014) at 9 (TX 164).)

396.3 Inks and dyes from paper mills operations were released into the Kalamazoo River. (Lacey 11/11/2014 Dep. Tr. at 68:17-22 (TX 368).)

396.4 Mill deinking operations used “dangerous” chemicals, including chloride and bleach. (Lacey 11/11/2014 Dep. Tr. at 85:18-86:2 (TX 368).)

397. Prior to issuance of pollution abatement orders by the Michigan Water Resources Commission (“MWRC”) in 1951, the Kalamazoo Mills spoke against cleaning up or decreasing pollution by paper mills into the Kalamazoo River and Portage Creek.

397.1 At a December 1950 conference before the MWRC concerning the Kalamazoo area, the President of the Michigan Paper Company stated:

“I’ve probably been in this stream pollution problem longer than anyone else in this room. I’ve been in the paper mill for a long time. . . . I don’t see how they are ever going to clean up this river and put some trout in it. If they do they will probably cost about one thousand or two thousand dollars a trout to the paper mills. When you take that money out of the paper mills, how are you going to keep them going? I think this should be declared a stream for this purpose for which we are using it for.”
(TX 4315 at -393.)

397.2 The Michigan Paper Co. (former owner of the Angell Street and Fountain Street Mills) wrote to the MWRC in October 1951 stating that “[i]n suggesting our program we have carefully considered our original thought when we first discussed this matter several years ago – that there is little to be gained if the work at the Michigan Paper Company is too far ahead of the work at the other larger mills up the River. It would seem to be neither fair nor reasonable to ask the Michigan Paper Company, which is down stream, to clean up its waste well before the other mills up the River.”
(TX 11285 at -870.)

397.3 The Mills objected to the MWRC’s plan to issue abatement orders; representatives of the various paper mills called for the Kalamazoo River to be declared a stream for the disposal of waste. (TX 4315 at -394-97.)

(1) The Kalamazoo Mills Discharged Pollutants in Violation of Government Orders

398. In response to paper mill pollution of the Kalamazoo River, in 1951 the MWRC prohibited papermill deinking operations from discharging *any* suspended solids into the river and prohibited papermill recycling operations from discharging more than 10 lbs. of suspended solids into the river per ton of product produced. (MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 44:13-16; 44:24-45:5 (TX 346); TX 11460 at -002; TX 11461 at -002; TX 11462 at -002; TX 11463 at -002; TX 11464 at -002; TX 11465 at -002; TX 11466 at -002; TX 11467 at -002; TX 11468 at -002; TX 11469 at -002; TX 11470 at -002; TX 11471 at -002; TX 11472 at -002.)

398.1 MWRC implemented these regulations “because the river had become quite polluted” from “paper mills along the Kalamazoo River” (Chadderon 10/30/2014 Dep. Tr. at 34:20-35:7 (TX 349).)

399. The Kalamazoo Mills repeatedly violated the MWRC’s 1950 orders by discharging excess amounts of waste into the Kalamazoo River. MDEQ described its files as full of instances in which recycling mills on the Kalamazoo River failed to comply with the MWRC’s orders. (MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 71:18-22 (TX 346).)

399.1 Regarding the King Mill, Allied Paper Corporation stated in 1958 that “[w]e are in flagrant violation of our Michigan Water Resources Commission orders on the amount of waste that we may discharge into the Kalamazoo River”. (TX 4321 at -533.)

399.2 At a 1958 conference before the MWRC, the president of KPC stated that the “Kalamazoo Paper Company was the first mill established [along the Kalamazoo River] and we have been making paper since 1867—maybe for that reason we could be called the father of this business. We aren’t the biggest, by any means, from the standpoint of production—we are a de-inking mill and one of the big offenders on that score. We are a de-inking mill as are Rex and Allied and Hamilton, and our very existence depends on de-inking.” (TX 4320 at -552.)

399.3 Regarding the Bryant Mill, Allied admitted that “[t]here are undoubtedly times when we are not in conformation with our orders from the WRC with regards to solids. We are rarely in line with regards to BOD”. (TX 4321 at -534.) MDEQ confirmed that these observations are consistent with its records from the period. (MDEQ 30(b)(6) 10/29/2014 Dep. Tr. at 271:23-272:7 (TX 346).)

399.4 MWRC reported in 1969 that GP, although connected to the Kalamazoo POTW, frequently bypassed that plant and discharged directly into the Kalamazoo River and had a “poor record” despite having a “satisfactory program”. (KZ-KRSG-00171845 at -848 (TX 11228).)

399.5 A February 1964 letter from the Michigan Water Resources Commission to the Allied Paper Corporation, stated that Allied’s performance was “not in accordance with assurances” it made to the Commission “following a similar bypass of untreated waste in November of 1961”. (TX 4309.1)

399.6 A multi-day survey conducted by the MWRC in July 1964 concluded that the MacSimBar Mill exceeded the Commission's restriction on non-deinking mill operations. (TX 4309 at -048.)

399.7 Former Mill employee Joseph Chadderdon testified that the Bryant Mill, the KPC Mill and Plainwell Mill did not comply with MWRC's regulations. Those mills failed to implement available wastewater treatment to meet the MWRC's regulations mainly because of cost. (Chadderdon 10/30/2014 Dep. Tr. at 36:14-37:5, 39:5-19 (TX 349).)

(2) The Kalamazoo Mills Resisted Implementation of Secondary Wastewater Treatment

400. The Kalamazoo Mills resisted implementation of available wastewater treatment processes until the late 1960s. The Kalamazoo Mills would have released fewer PCBs into the Site had they adopted secondary treatment sooner.

401. The Kalamazoo Mills resisted implementing secondary treatment until the late 1960s (TX 4320 at -551-56), even though several paper mills throughout the United States had been using secondary treatment since the early 1950s (TX 11374 at -886).

402. As early as 1948, the National Council for Stream Improvement of the Pulp, Paper and Paperboard Industries ("NCASI") issued a report on methods for treating deinking wastes to allow discharge into a receiving stream without creating a public nuisance. (TX 11373.) The report indicated that secondary treatment using biological treatment with activated sludge showed BOD removals of 64% to 80% and that NCASI's studies had "showed every indication that the [secondary treatment] process would be economically practical without excessive chemical or compressed air costs". (TX 4320 at -421, -449-450.)

402.1 Contemporary studies showed that secondary treatment using conventional activated sludge could achieve PCB removal rates up to 90%. (TX 12052; TX 12053; TX 12054; TX 12055; TX 12056; TX 12057; TX 12058; TX 12059; TX 12060; TX 12061; TX 12062; TX 12063; TX 12064; TX 12065; TX 12066; TX 12067; TX 12068.)

403. In the early and mid 1950s, the MWRC recognized that the Kalamazoo Mills would have to implement secondary treatment to meet pollution limits at the Kalamazoo River. (TX 11266 at -381-382.)

403.1 Loring Oeming, Chief Engineer for the MWRC, stated at a public hearing in 1950 that while there was "considerable work to be done on the secondary phase of treatment . . . we don't feel we should stand still until that secondary phase of treatment is finished . . . the ultimate objective would be that all pollution sources would be evaluated first and then apply secondary treatment to those sources when we get the answer for this thing, and that means on the deink mills." (TX 11266 at -381-82.)

403.2 At a meeting with the paper mills, Mr. Oeming stated: "I don't know why we're fooling any further on the primary part of it. As far as we are concerned, this thing

should go along and develop what you could do in biological treatment on the secondary part of this mill. That absolutely must be done, must be carried forward. But the other part you've answered, and the National Council has answered for you, and I refer you to their reports. They recommend one hour's sedimentation preceding biological treatment for all of these mills." (TX 4952 at -181.)

403.3 Mr. Oeming dismissed protests by paper mills that they should be able to dispose of their sludge at a profit or no cost: "I'm sorry but you're barking up the wrong tree if you expect to dispose of sludge at a profit, you're never going to find that answer, it is always going to be a problem." (TX 4952 at -181-82.)

403.4 In 1956, the MWRC issued a report on the condition of the Kalamazoo River and concluded that secondary treatment would be required in order to meet the amount of waste load reductions required, especially at deinking mills. (TX 11271 at -524.)

404. Secondary treatment for paper mill effluent was technologically available to the Kalamazoo Mills by the mid-1950s and was economically feasible for the Kalamazoo Mills no later than 1960.

404.1 In 1953, NCASI reported that a demonstration plant that had been constructed by the Kalamazoo Area Mills in the early 1950s to apply secondary treatment using activated sludge to paper mill wastes. (TX 11316.) NCASI's report indicated that through the combined use of primary and secondary treatment, the Kalamazoo Demonstration Plant's overall removal of suspended solids ranged from 85% to 94% and overall removal of BOD ranged from 77% to 93%. (TX 11316 at -998.)

404.2 In 1960, the Kalamazoo River Improvement Company (KRIC), a consortium of Kalamazoo area paper mills, issued a report on its investigations into the feasibility of secondary treatment stating that "[e]ffective treatment of deinking waste by the activated sludge process has been demonstrated by laboratory, pilot plant and full scale operations over the past ten years." (TX 5213 at -029.)

404.3 In 1960, Anthony Palladino, a member of the KRIC, proposed a "simplified and economical" approach to secondary treatment at the Kalamazoo Paper Company. (TX 11015 at -076.) It was never adopted.

404.4 A 1960 study commission by Allied, concluded that a proposed joint treatment plan of paper mill waste in Kalamazoo with the City sewage at the City's Sewage Treatment Plant was "entirely feasible" and "mutually advantageous to all concerned". (TX 11277 at -605.)

405. A 1958 meeting before the MWRC reflected the Kalamazoo Mills' resistance to implementing secondary treatment. (TX 4320.)

405.1 The Chairman of the MWRC expressed his concern with the paper mills' reluctance to address the problem: "I am also at a loss to figure out why it is that the paper industry, of all of the others, seems to be the slowest in finding a solution to their

particular problem. . . . But after talking with the paper mills in Michigan and talking with paper mill operators from other states I find all of them in the same predicament. They are hesitant about attempting to find a re-use for the water, their wastes, or a reasonable economic solution. Why that is, I don't know. I don't pretend to know. But it seems to be a peculiarity of the paper industry." (TX 4320 at -555.)

405.2 At that meeting, a representative of the Rex Mill stated "I think there's a pistol pointed at Kalamazoo, and the bullet is marked 'paper mills' and I would suggest at this meeting that the paper mills ought to get together and try and resolve this problem—knowing what the inevitable result is going to be. They are going to have to have some form of secondary treatment." (TX 4320 at -586.)

406. In December of 1963, five of the area mills announced their intention to submit their wastes for joint secondary treatment at the new City of Kalamazoo POTW. (TX 11259 at -935-59.)

406.1 Allied declined to participate in the joint treatment plan. (TX 11259 at -946-47.)

407. Joint secondary treatment at the Kalamazoo POTW did not begin until 1967. (TX 5290 at -060.)

408. Allied did not submit its wastes to the Kalamazoo POTW for joint secondary treatment until September 1969. (IPC 003-0000685-1164 at -776 (TX 4877); TX 12502 at -310.)

409. Seventeen years passed between the initial discussions of secondary treatment with the MWRC and the establishment of the Kalamazoo POTW. (*Compare* TX 11266 and TX 4952 *with* TX 5290 at -060.)

410. Had the Kalamazoo Mills implemented secondary treatment when it had first been demonstrated by the KRIC pilot treatment plant to be effective in the early 1950s, much of the PCB problem at the Kalamazoo could likely have been avoided. (Barrick R. (12/05/2014) at 12-15 (TX 164); Hesse 9/25/2014 Dep. Tr. at 47:20-48:15 (TX 363) (the settling basins used by paper mills "didn't completely control the discharges of . . . suspended solids").)

(3) The Kalamazoo Mills Routinely Bypassed Wastewater Treatments

411. The Kalamazoo Mills released PCBs and other contaminants into the Kalamazoo River by bypassing wastewater treatment processes.

412. The Kalamazoo Mills were documented as frequently bypassing wastewater treatment processes (primary and secondary treatment). The Kalamazoo Mills also bypassed wastewater processes in many undocumented instances as bypass events were "a highly kept secret" by the mills. (Pope 10/8/14 Dep. Tr. at 32:18-19 (TX 374).)

413. The Kalamazoo Mills, other than the KVP Mill, failed to meet Michigan 1975 regulations concerning BOD. (Chadderdon 10/30/2014 Dep. Tr. at 48:12-49:4 (TX 349).)

414. KPC has been documented as bypassing its wastewater treatment processes numerous times over the period.

414.1 On May 6, 1968, the MWRC reported that Mill 2 wastewater bypassed KPC's clarifier due to a faulty pump "for most of the months of July and August". (TX 4201.)

414.2 On March 3, 1969, the MWRC reported that KPC's "#1 interceptor sewer was bypassed from 7:00 a.m. to 11:30 a.m." (TX 11441; TX 11110.)

414.3 On October 15, 1969, the MWRC reported that "[a]lthough connected to the municipal plant [Georgia-Pacific] frequently experiences trouble which results in bypassing into the Kalamazoo River. Several changes have been made within the last two months to minimize bypassing . . . satisfactory program, poor record". (TX 11228 at -848.)

414.4 See Addendum E for additional bypass events documented at the KPC Mill.

415. The Bryant Mill has been documented as bypassing its wastewater treatment processes numerous times throughout the period.

415.1 On December 15, 1958, Allied internal correspondence revealed that "[t]he main problem in operation [at the Bryant Mill] is the periodic bypassing of the highly loaded deinking waste directly to Portage Creek. . . . There are undoubtedly times when we are not in conformation with our orders from the WRC with regards to solids. We are rarely in line with regards to BOD." (TX 11169 at -313; TX 4877 at -1059.)

415.2 On May 25, 1959, Allied internal correspondence revealed that "[a]t Bryant there is some by-passing of the waste to the creek". (TX 4877 at -1059.)

415.3 On April 22, 1960, Allied internal correspondence revealed that "when one pu[m]p is out for repairs, the other pump cannot handle all the waste water when one of the machines is on colors, consequently the colored water goes to the creek directly". (TX 5217 at -989.)

415.4 On February 20, 1964, the MWRC reported that "the waste control facilities at the Bryant Division were inoperative and waste water was being discharged to Portage Creek without treatment for the removal of settleable solids". (TX 4309 at -124.)

415.5 On December 3, 1964, Allied internal correspondence reported a pump failure and bypass of "50% of waste". (TX 4940.)

415.6 On April 4, 1965, Allied internal correspondence revealed that there was "some leakage of white water near the East side of Portage Creek". Allied also noted the MWRC's increased focus "on Portage Creek in the near future". (TX 11011.)

415.7 On December 15, 1967, the MWRC reported that “[i]t has been our experience that the various pumping stations frequently bypass and permit untreated wastes to flow directly to Portage Creek”. (TX 4877 at -1062-063.)

415.8 On January 29, 1968, the MWRC inspected the Bryant Mill and reported that “[a]pproximately 300 gpm of waste was entering Portage Creek”. (TX 4938.)

415.9 On May 3, 1968, MWRC staff “reported repeated incidents of partial waste bypassing to Portage Creek without processing”. (TX 4877 at -1063.)

415.10 On June 13, 1968, an Allied letter to the MWRC admitted that Allied was “directed by the [MWRC] to stop by-passing the Bryant clarifier”. (TX 4877.)

415.11 On July 25, 1968, the MWRC reported “[a] very large amount of [waste] (several hundred gallons per minute) was being bypassed” at the Bryant Mill. (TX 4406.)

415.12 On October 27, 1971, Allied internal correspondence reported “numerous overflows, mostly during [its] weekend shutdowns”. (TX 4877 at -1065.)

415.13 See Addendum F for additional bypass events documented at the Bryant Mill.

416. The King Mill has been documented as bypassing its wastewater treatment processes numerous times throughout the period.

416.1 On November 14, 1956, an internal King Mill report observed waste bypassing the clarifier and revealed that while steps were being taken to address the matter and that loss was low, the “[f]low figure [was] low” and “[s]ome waste [bypassed the] tank”. (TX 2002 at -489.)

416.2 In November 1958, an internal King Mill report observed “[b]ypassing as usual”. (TX 11372.)

416.3 In December 1958, an internal King Mill report revealed bypassing and noted “spot samples – at King poor waste treatment operations cause the exceptionally high results”. (TX 111371.)

416.4 On December 31, 1958, internal King Mill correspondence revealed that the Mill was “in flagrant violation of [its] Michigan Water Resources Commission orders on the amount of waste that [it] may discharge into the Kalamazoo River. Presently and for some time now, [it has] done little or no effective settling of [its] mill wastes. The system has been in physical operation with the only thing happening being power usage”. (TX 11169 at -312.)

416.5 On April 22, 1960, internal King Mill correspondence revealed that the King Mill had to “[r]epair and recondition the bar grates so that they are not continually causing shutdowns of the waste treatment system” as “[d]uring shutdown all the waste water is by passed directly to the river”. (TX 5217 at -989.)

416.6 On August 2, 1961, the MWRC reported that “an undetermined amount of by-passing takes place at the back water gate on the by-pass sewer line. . . . This situation could be easily corrected by the construction of a weir in the by-pass line with the crest set at such a level as to prevent flooding problems”. (TX 1050 at -223.)

416.7 In November 1962, internal King Mill correspondence stated that the flow “was below normal during October (and part of September also) because of by-passing to the river before the clarifier wet well through the butterfly swing gate. The pump on the wet well was not operating at adequate capacity thus the by-passing. This by passing thus reduced the influent B.O.D. and suspended solids proportionally”. (TX 4890.)

416.8 On July 14, 1970, the MWRC reported that King “was by-passing untreated waste into the Kalamazoo River . . . as the result of the drive gears breaking for the clarifier scraper mechanism”. (TX 11430 at -635.)

416.9 See Addendum G for additional bypass events documented at the King Mill.

417. Plainwell has been documented as bypassing its wastewater treatment processes numerous times over the period.

417.1 On July 26, 1965, a Weyerhaeuser interoffice communication revealed that the “treatment system is doing an adequate job on the water put to it, but preliminary work has shown that [its] main problem is the loss of untreated water through the #2 sewer and the boiler house sewer”. Weyerhaeuser also revealed that holes in the walls of the savealls caused “costly” losses to the river. Weyerhaeuser concluded by stating: “It is obvious we are not in compliance, due to the fact that our sewers will not handle the load and that too much BCD generating material by passes the settling tank”. (TX 11944.)

417.2 On January 18, 1966, a Weyerhaeuser interoffice communication revealed that there had been a “considerable amount of leakage” from the valve to bypass the treatment plant. (TX 11182.)

417.3 See Addendum H for additional bypass events documented Plainwell Mill.

418. Sutherland has been documented as bypassing its wastewater treatment processes numerous times over the period.

418.1 On December 20, 1967, the MWRC observed “[a]n estimated 150 gpm were flowing in the ditch leading from [the Brown Paper Co.]” (TX 4309.9.)

418.2 On March 22, 1968, the MWRC reported “[a]n estimated 200 pgm were flowing in the ditch” containing bypasses from Brown Paper Co. (TX 4404.)

418.3 In an October 2000 telephone interview, William Thacker, Senior Research Engineer for the National Council for Air and Stream Improvement stated: “Approximately 1000 gallons of Board Mill effluent was discharged to the Kalamazoo

River. It is unclear whether this effluent was treated or untreated when it was discharged. Board Mill employees reported the spill to state officials.” (TX 11113 at -589.)

418.4 See Addendum I for additional bypass events documented at the Sutherland Mill.

419. MacSimBar has been documented as bypassing its wastewater treatment processes numerous times over the period.

419.1 John Syers, an employee at the Otsego Mill from 1952–1977, testified “that from 1953 until the time Mead purchased the mill [1968], there were about four 30,000–40,000 gallon releases from the clarifier due to a piston pump failure”. (TX 11122 at -339.)

419.2 On February 7, 1979, “[a]pproximately 30,000 – 50,000 gallons of influent to the primary clarifiers was discharged to the Kalamazoo River. The discharge occurred when mechanical problems caused an overload of the waste treatment system”. (TX 11122 at -341; TX 11439.)

419.3 On April 6, 1981, “[a]pproximately 350,000 – 500,000 gallons of wastewater was discharged to the Kalamazoo River. . . . The discharge was caused by a failure in the electrical system operating a lift station and human error”. (TX 11122 at -342; TX 4956.)

419.4 See Addendum J for additional bypass events documented at the MacSimBar Mill.

420. The Monarch Mill has been documented as bypassing its wastewater treatment processes numerous times over the period.

420.1 On September 24, 1970, the MWRC reported that the creek downstream from the Monarch clarifier was “white and extremely turbid” and “small quantities (approximately 5-10 gpm) of septic, supernatant from the sludge ponds were observed discharging to Portage Creek at several locations”. (TX 11241.)

420.2 On November 19, 1975, the MWRC reported that the Monarch clarifier was “the source of high turbidity and suspended solids” and that “[f]urther contact with mill personnel confirmed that cleanup and washdown of equipment . . . overloaded the clarifier’s capability”. The MWRC also “discovered another outlet from the machine room basement containing miscellaneous drainage” for which the Monarch Mill did not have a permit. (TX 11165 at -929.)

420.3 In August 1976, the MDNR reported that “[l]eachate from [Monarch’s] sludge disposal area was observed to be flowing into a ditch and eventually to Portage Creek, just upstream of the company’s intake”. (TX 11166 at -999.)

420.4 See Addendum K for additional bypass events documented at the Monarch Mill.

421. The KVP and Otsego-Menasha Mills have been documented as bypassing their wastewater treatment processes numerous times over the period. (*See* Addendum L.)

422. Although no individual bypass events were documented as occurring at the Hawthorne Mill, a 1968 river sampling survey reported the following: “No bypass was occurring at the time of our inspection but the bypass ditch to the river contained a kelly green colored liquid, high in fiber content. A member of Hawthorne’s staff told us that they had been producing green paper the previous day . . . but had no idea how the bypass could have occurred unless a member of the City of Kalamazoo’s staff had caused this.” (TX 4404.)

423. All parties to this litigation have served expert reports that identify mill bypasses as sources of pollution to the river.

423.1 NCR’s expert witness, Robert Barrick, discussed the significance of mills surpassing MWRC discharge limits in bypassing wastewater treatment processes. (Barrick R. (12/5/2014) at 4-6 (TX 164).)

423.2 GP’s expert Dr. Carl Adams, chronicled bypass events at certain mills. (Adams R. (12/5/2014) Table 7 (TX 5752).)

423.3 IP’s expert witness, Dr. Frank Woodard, chronicled documented mill bypasses. (Woodard R. (12/5/2015), Table 6.5 (TX 4555).)

423.4 Weyerhaeuser’s expert, Dr. Neil Ram, discussed bypasses as significant pollution events. (Ram R. (1/30/2015) at 50 (TX 218).)

(4) Paper Companies Knew that Their Effluent Could Result in Harm to Water Bodies

424. Paper mills, and in particular, recycling mills, used and discharge large amounts of water during the Production Period. (TX 11678; TX 11629.)

425. The resulting effluent contained a variety of waste matter including heavy solids (e.g., fibers, bark, dirt), dissolved solids, and chemicals (e.g., mercury, bleaching chemicals). (TX 12092 at 89-91.)

426. Paper mills were required by law to limit discharges of suspended solids in their effluent. (TX 11678; TX 12092; TX 12508 at -862.)

427. Mills using secondary fiber understood the importance of keeping unwanted contaminants out of their raw materials and understood the need to work closely with paper brokers and suppliers to do this. (TX 11580.)

428. As of 1970, one third of all effluent was discharged with no treatment at all, and another third was treated only for the heaviest solids. (TX 11670 at 44-59.)

429. Many mills on the Kalamazoo River, including Allied, Bryant and St. Regis Paper, failed to properly treat effluent and thereby violated Michigan regulations during the

Production Period. (TX 2000; TX 2006; TX 4906; TX 4919; TX 4910; TX 4913; TX 11010 at -201, 213; TX 4914.)

430. Had the Kalamazoo Mills properly treated their effluent, they would have minimized the amount of solid waste discharged through their effluent and, as a result, would have reduced the amount of PCBs they discharged into the Kalamazoo River.

431. As soon as the mills understood that PCBs were in CCP, they also would have understood at that PCBs were in their mill effluent. (TX 11667.)

432. The mills were instructed by the EPA to minimize PCB discharges to water bodies. (TX 11095)

(5) The Kalamazoo Mills Took No Action Upon Being Told by the Government that Their Recycling Operations Were Releasing PCBs into the Kalamazoo River

433. In the 1970s, paper mills actively resisted PCB regulations.

433.1 In March 1972, the Kalamazoo-based BRDA, an organization representing the recycled paperboard industry, wrote to its membership about a meeting with the FDA concerning PCB regulations. In this letter, the BRDA stated that it was considering legal action and that the FDA's PCB plans were "impossible". (TX 4158 at -421-22.)

433.2 In February 1973, the American Paper Institute (the "API") an organization representing the paper industry, prepared comments on a 10 parts-per-million limit on PCBs in food packaging proposed by the FDA. (TX 3594.) In those comments, the API criticized the FDA for failing to distinguish between different PCBs and stated that Aroclor 1242 metabolizes or decomposes in the environment. (TX 3594.)

433.3 In February 1976, a representative of GP's predecessor, Fort Howard, testified at a hearing that banning PCBs would jeopardize "hundreds of thousands of Wisconsin jobs." (TX 12523.)

434. Paper mills continued to recycle CCP after learning it contained PCBs.

434.1 In July 1975, the EPA concluded that the paper industry was a continued source of the PCB "contamination problem in the Kalamazoo River." (TX 12524 at -483.)

434.2 In March 1976, GP's predecessor Fort Howard issued a "Report on Polychlorinated Biphenyls" that set forth the company's nine-point "position on the PCBs presently found in its effluent". (TX 3592.) Fort Howard argued that the discharge of Aroclor 1242 should be permitted because Aroclor was not believed to be harmful to the environment—it was not being found, did not appear to bioaccumulate and was believed to degrade (unlike higher-chlorinated Aroclors). Fort Howard's effluent contained PCBs because at that time it purchased and recycled mixed paper grades that

contained pre-1971 post-consumer CCP. (Geigel 4/9/2009 Dep. Tr. at 164:17-165:19 (TX 6); TX 3459; TX 5456 at -808; TX 12522 at -958.)

435. In 1972, MDNR told the Kalamazoo Mills that PCBs were found in their wastewater discharges, but the Kalamazoo Mills took no responsive actions.

435.1 An April 1972 report issued by MDNR, stated that “major sources” of PCBs in the Kalamazoo River appear to be, among others, “reclamation of waste paper on which specialty inks have been used”. (TX 4191 at -633.)

435.2 MDNR’s Chief PCB regulator and author of MDNR’s April 1972 study, John Hesse, testified that he was not aware of any investigative actions taken by the Kalamazoo Mills in response to the report. (Hesse 9/25/2014 Dep. Tr. at 70:21-72:16 (TX 363).) None of the Kalamazoo Mills contacted Mr. Hesse about the study’s conclusions. (Hesse 9/25/2014 Dep. Tr. at 70:21-72:16 (TX 363).)

435.3 At a May 1972 meeting where representatives of the Kalamazoo Mills were present, Mr. Hesse presented MDNR’s conclusions that reclamation of waste paper appeared to be a source of PCBs to the Kalamazoo River. (Hesse 9/25/2014 Dep. Tr. at 88:15-89:20, 90:4-10 (TX 363).)

435.4 Following the May 1972 presentation, none of the Kalamazoo Mills took actions to reduce waste discharges to the Kalamazoo River. (Hesse 9/25/2014 Dep. Tr. at 103:4-13 (TX 363).) Nor did any of the Kalamazoo Mills contact Mr. Hesse. (*Id.* at 98:21-997.)

436. Paper mills continued to release PCBs into the environment until at least 1985. (Barrick R. (12/5/2014) at 20 (TX 164); TX 11170 at -707 (“We have recent (1985) data which show detectable PCB’s in their clarifier discharge (69 ng/l). The contaminated sediments in Bryant Mill Pond are continuing to release PCB’s to the creek and the Kalamazoo River.”).)

H. Other Factors Suggest the Mill Parties Bear Primary Responsibility

437. Other factors suggest that the Mill Parties, and not NCR, should bear primary responsibility for cleanup costs at the Site, including that: (i) the Kalamazoo Mills benefitted disproportionately from paper recycling, (ii) the Mill Parties can better afford clean-up of the Site, (iii) GP has done little to cooperate with the government, and (iv) the construction and operation by the Kalamazoo Mills of the landfill operable units fell below any reasonable standard of care.

(1) The Kalamazoo Mills Benefitted Disproportionately from Paper Recycling

438. The Mill Parties garnered substantial economic benefits from their decisions leading to the release of Aroclor 1242 at the Site—namely, the decisions (i) to use recovered paper (including CCP) as an input, (ii) to deink recovered paper, and (iii) to forego adequate treatment of wastewater.

439. Recovered paper was a useful and valuable input for the paper mills during the Relevant Period.

439.1 In 1951, the Kalamazoo River area was “the largest paper-making area in America using waste paper as the principle raw material.” (TX 11139 at -539.)

439.2 Recovered paper represented a large portion of the total inputs to many of the mills at the Site during the Relevant Period. (Scott R. (2/27/2015) at Exs. 7-20 (TX 2508).)

439.3 CCP, with its high quality fiber, was a valuable component of the recovered paper used by the mills at the Site. (Martin 8/30/2011 Dep. Tr. at 107:12-109:20, 110:9-12 (TX 37); Grabow 3/28/2012 Dep. Tr. at 55:21-56:7 (TX 55).)

440. The use of recovered paper instead of virgin pulp was highly profitable to the mills at the Site for many (primarily economic) reasons.

440.1 The price of recovered paper during the Relevant Period often was lower than the price of virgin pulp. For example, in 1954, the St. Regis mill paid a price for virgin pulp that was 2.4 times the price it paid for recovered paper. (TX 4294 at -179.)

440.2 In 1974, the Brown Company, which owned the KVP mill at the time, paid four times as much for virgin pulp as it paid for recovered paper. (TX 5744 at -655,-698, -704-05.)

440.3 NCR expert, Dr. Gordon Rausser, estimates that the mills at the Site saved at least approximately \$447.5 million (in 1981 dollars) from using recovered paper as an input during the Relevant Period. (Rausser R. (1/30/2015) ¶ 50 (TX 2500).)

440.4 In addition to reduced input prices (and the savings therefrom), the use of recovered paper was economically advantageous to the mills because it may have shielded the mills from the risk of price spikes in virgin pulp due to supply shortages, which was a concern at times during the Relevant Period. (TX 5744 at -689.) (“When the corporate fiber shortage of approximately 30,000 tons in 1975 is taken into consideration, this proposal [*i.e.*, using recovered paper as a pulp substitute] becomes even more attractive. The alternatives are equipment shutdowns or the purchase of ‘black market’ pulp at a premium (currently \$200 per ton over market).”)

440.5 Recovered paper provided the mills with access to an alternative supply source, which, in turn, increased their power to negotiate lower input prices. (Rausser R. (1/30/2015) ¶ 46 (TX 2500).)

440.6 By deinking, the mills could use certain lower grades of recovered paper as substitutes for more expensive inputs to produce fine-grade papers, which commanded higher prices in the market. (Rausser R. (1/30/2015) ¶¶ 51-53 (TX 2500).)

440.7 Deinking thus increased the value of recovered paper, and the deinking mills benefitted economically from that increase in value. (Rausser R. (1/30/2015) ¶ 53 (TX 2500).)

441. The Kalamazoo Mills delayed installation of proper wastewater treatment systems and avoided complying with regulators' requirements and recommendations to their economic benefit. (*See supra* § III.G(2).)

441.1 The primary motivation for delay appears to have been economic. The president of Allied Paper requested a five-year delay in the implementation of secondary treatment due to economic considerations. (TX 11239 at -117.)

441.2 Proper wastewater treatment is expensive, so these delays conferred substantial economic benefits on the Mill Parties. Relying on studies conducted in the 1950s and 1960s, Dr. Rausser estimated the amount that the mills saved from delaying primary and secondary treatment.

441.3 Dr. Rausser estimates that four mills at the Site (KPC Mill, King Mill, Bryant Mill and Plainwell Mill), which delayed implementing primary treatment after they were ordered to do so by MWRC in 1954, collectively saved around \$745,575 (in 1981 dollars) from the delay. (Rausser R. (1/30/2015) ¶ 60 (TX 2500).)

441.4 Dr. Rausser estimates that all of the mills at the Site, collectively, could have saved around \$27.0 million (in 1981 dollars) from delaying secondary treatment over a 10-year period (1954 to 1963). (Rausser R. (1/30/2015) 62 (TX 2500).)

(2) The Mill Parties Can Better Afford Clean-up of the Site

442. Each of the three Mill Parties has greater financial resources than NCR to fund remediation of the Site. (Rausser R. (1/30/2015) ¶¶ 108-111 (TX 2500).)

443. GP's most-recent available financial reports report that in 2004, GP received approximately \$19.66 billion in revenue and \$624 million in net income. (TX 12041 at 42.)

444. GP was acquired by Koch Industries in 2005 and, since that time, has not filed financial statements with the SEC. In 2013, Koch Industries had \$115 billion in revenue. (TX 12262.)

445. In 2014, IP reported approximately \$23.6 billion in revenue and \$536 million in net earnings. (TX 12038 at 15.)

446. In 2014, Weyerhaeuser reported approximately \$7.403 billion in revenue and \$1.782 billion in net earnings. (TX 12039 at 87.)

447. NCR's most recent filings show that it has the smallest revenue and earnings among the parties, with approximately \$6.6 billion in revenue and \$195 million in net income. (TX 12037 at 42.)

(3) GP Overstates its Cooperation with the Government

448. While GP professes to have been cooperative with government authorities in dealing with the contamination of the Site, that is not so.

449. As detailed above in section III.G(1), the Kalamazoo Mills ignored repeated requests by the government for decades in the 1950s, 1960s, and 1970s to limit their discharges.

450. GP's former long-time remediation contractor, Blasland, Bouck & Lee ("BBL") failed to cooperate with MDEQ in developing plans to clean up the Site.

450.1 MDEQ's former Project Manager for the Site testified that there was an "astonishing lack of cooperation" from GP's contractor BB&L at the Site. (Cornelius 11/12/2014 Dep. Tr. at 205:22-24 (TX 351).)

450.2 MDEQ's former Project Manager for the Site testified that the amount of review and commenting that MDEQ provided to submissions by the KRSG was "unprecedented in the state of Michigan for an environmental site", (Cornelius 11/12/2014 Dep. Tr. at 153:12-17), and "the comments [MDEQ] provided to the PRPs and BBL would be longer than the documents that had been submitted", often requiring "multiple rounds of comments". (Cornelius 11/12/2014 Dep. Tr. at 153:4-11 (TX 351).)

450.3 GP's contractor, BB&L, "regularly [sought] to finalize documents notwithstanding that it had not addressed outstanding issues and MDNR comments" such that "MDNR had to take over completion of work documents", causing substantial delay and increasing costs. (Cornelius 11/12/2014 Dep. Tr. at 164:3-165:3 (TX 351).)

450.4 GP's contractor, BB&L, "regularly fail[ed] to produce documents that incorporated language agreed upon with MDNR", despite numerous follow-ups by MDNR. (Cornelius 11/12/2014 Dep. Tr. at 162:21-163:7 (TX 351); TX 4461 at 831 ("This was the second time the MDNR had commented on this document. During our review of the second draft it became apparent that the [PRPs] were incapable of drafting the chapter entitled 'Description of Polychlorinated Biphenyls, to the satisfaction of the MDNR and the [EPA]')).)

450.5 GP's contractor, BB&L, "regularly submit[ed] documents in piecemeal, making it more difficult for MDNR to review and provide comments", despite MDNR's communication that the practice should stop. (Cornelius 11/12/2014 Dep. Tr. at 163:8-18 (TX 351).)

450.6 In rejecting draft work plan and associated documents submitted by GP and the KRSG, MDNR stated in a letter dated July 24, 1991, that "the draft work plan and associated documents as submitted are unacceptable because they are inconsistent with the requirements of the AOC." (TX 4448 at 2.)

450.7 GP's contractor, BB&L, "regularly fail[ed] to provide information requested by MDEQ to support conclusions BB&L has reached". (Cornelius 11/12/2014 Dep. Tr. at 163:23-164:2 (TX 351).)

450.8 In a February 2000 letter to GP's contractor, BB&L, MDEQ stated that the "Technical Memoranda (TMs) written by BB&L, on behalf of the KRSG, in general contains numerous errors, inappropriate information, incorrect calculation parameters, and are missing significant support documentation". (TX 4457 at -928.)

451. MDNR repeatedly rejected submissions by GP and other members of the KRSG as deficient because they provided legal argument and lobbying efforts instead of scientific or engineering analysis:

451.1 In July 2002 letter to the EPA disapproving the draft OU5 RI/FS submitted by GP and the other members of the KRSG, MDEQ stated:

"In the creation and submittal of this draft RI/FS, the KRSG has demonstrated an inability or unwillingness to report facts objectively. The MDEQ does not consider the draft RI/FS a good faith effort to develop reasonable remedial options or impartially evaluate alternatives consistent with the AOC or the National Contingency Plan (NCP). The MDEQ believes the KRSG's preferred alternative, as a stand-alone remedy, does not satisfy the two threshold evaluation criteria under the NCP Overall, much of the RI/FS reads as an argumentative advocacy piece intended to persuade the reader that the MDNR is partially to blame for the polychlorinated biphenyl contamination in the river." (TX 12025.)

451.2 The EPA criticized the KRSG's draft OU5 RI/FS stating:

"The essential purposes of an RI/FS are (1) to characterize the nature and extent of hazardous contamination at a Site; and (2) to develop and evaluate effective remedial alternatives. The document should not be used to support or defend against a liability lawsuit. Nevertheless, a significant portion of the RI and, to a lesser extent, the FS, appears to be devoted to targeting the Michigan Department of Natural Resources as a potentially responsible party for the PCB contamination in the Kalamazoo River. In many cases, the RI reads like a legal brief supporting the PRPs; argument that the MDNR exacerbated the harm in the Kalamazoo River by opening up the gates and lowering the sills on three dams." (TX 11862 at -169.)

451.3 The MDEQ never approved the KRSG's draft OU5 RI/FS. According to the EPA, it is "uncommon" for a document submission by a PRP to never receive approval. (EPA 30(b)(6) 3/19/2015 Dep. Tr. at 223:24-225:6 (TX 377).)

452. GP's contractor, BB&L, "regularly [said] that they were not going to meet deadlines that had been provided by MDNR and that extensions would be required". (Cornelius 11/12/2014 Dep. Tr. at 163:19-22 (TX 351).)

452.1 Final approval by MDEQ for the KRSG's proposed work plan for developing RI/FS work was significantly delayed, requiring two years before receiving final approval because of deficient document submissions by the KRSG. (*See* Cornelius 11/12/2014 Dep. Tr. at 64:13-65:21 (TX 351).)

452.2 In rejecting a "good faith" proposal submitted by the GP and other PRPs, the MDEQ stated that the proposal was "deficient because it does not contain a Scope of Work (SOW) with a time line for implementing the Remedial Investigation / Feasibility Study" (TX 4447 at 1.)

453. MDNR's former project manager for the Site testified that "it was a common problem that [BB&L] did not take direction from MDNR in the field", (Cornelius 11/12/2014 Dep. Tr. at 90:6-8), and that MDEQ had to specifically communicate to BB&L it was to take instruction from MDEQ's contractor. (Cornelius 11/12/2014 Dep. Tr. at 88:9-90:5 (TX 351); TX 4453.)

453.1 GP's contractor, BB&L, failed in some instances to obtain required permits for collecting certain samples from the Site. (Cornelius 11/12/2014 Dep. Tr. at 95:5-17 (TX 351).)

453.2 GP's contractor, BB&L, failed to make available sufficient staffing to complete required sampling tasks despite MDNR raising the staffing shortage to BB&L's project manager. (Cornelius 11/12/2014 Dep. Tr. at 90:24-92:19 (TX 351); TX 4453 at -068.) BB&L's staffing shortages resulted in work disruptions. (*Id.*)

453.3 GP's contractor, BB&L, "failed to conduct sufficient sampling to establish the nature and extent of contamination" in certain areas of the Site. (Cornelius 11/12/2014 Dep. Tr. at 97:4-11 (TX 351); TX 4454.)

454. In an effort to alter MDEQ's decisions rejecting submissions made by the KRSG, GP's contractor, BB&L, "tr[ie]d to go over the head of staff" at MDEQ, resulting in delays and increased costs. (Cornelius 11/12/2014 Dep. Tr. at 83:19-84:5 (TX 351).)

454.1 In response to concerns communicated by MDEQ staff about installing sheet pile wall at a particular location at the Site because of groundwater concerns, (TX 4452), BB&L sought to reverse the position of MDEQ's staff position with an MDEQ supervisor instead of addressing the stated concerns. (Cornelius 11/12/2014 Dep. Tr. at 83:19-84:5 (TX 351).)

455. GP replaced its contractor BB&L because of BB&L's acrimonious relationship with MDEQ and the EPA.

455.1 GP's former project manager testified that GP replaced BB&L with a new remediation contractor because GP "wanted to see if we could be more of a joint effort/coordinated effort with them, as opposed to maybe more of adversarial relationship, especially with MDEQ, which was needed for many years". (Griffith 8/28/2014 Dep. Tr. at 19:23-21:2 (TX 359).)

455.2 MDEQ recommended that the KRSG replace its remediation contractor. (TX 7034.) The EPA's Project Manager for the Site testified that in his experience he had never seen a state agency recommend that the EPA demand that a PRP group replace its remediation contractor. (EPA 30(b)(6) 3/19/2015 at 219:10-220:6 (TX 377).)

(4) The Mill Parties Construction and Operation of the Landfill Operating Units Fell Below Any Reasonable Standard of Care

456. The Mill Parties improperly constructed and operated the landfill operating units and, as a result, caused further PCB contamination in the Kalamazoo River.

457. Photographic evidence demonstrates that GP constructed the Willow Boulevard portion of OU2 *in* the Kalamazoo River by successively dumping paper mill waste directly into the River. (Hagen R. (1/30/2015) at App. E (TX 2452).)

458. Improper maintenance and operations have been repeatedly documented at the OU1 Allied Landfill.

458.1 The Kalamazoo County Health Department (“KCHD”) cited the King Highway Landfill (OU3) for violations concerning improper drainage facilities at the site. (TX 11753.)

[illegible]

458.3 Kalamazoo County Health and Community Services Department inspection records concerning the Allied Paper Landfill (OU1) document paper mill waste being dumped outside of the permitted area. (Hagen R. (1/30/2015) App. I (TX 2452); TX 11753; TX 11753.)

458.4 Kalamazoo County Health and Community Services Department inspection records concerning the Allied Paper Landfill (OU1) document paper mill waste being dumped in a floodplain area or directly into water. (Hagen R. (1/30/2015), App. E (TX 2452); TX 11753; TX 11753; TX 11753; TX 11753.)

IV. GP's Claimed Costs

459. Neither IP nor Weyerhaeuser seeks costs from NCR. (*See* IP Resp. to NCR Interrog. (7/7/2014) at 26 (“International Paper has not taken any direct Action with respect to the Site”) (TX 12383); Weyerhaeuser 30(b)(6) 10/20/2014 Dep. Tr. at 168:6-169:5.)

460. GP seeks past and future costs incurred in connection with remediating the Site. (First Am. Compl. at 38 (TX 3015).) GP claims past costs in the total amount of \$105,461,169 as follows:

1990 AOC – RI/FS	\$33,294,786
2000 AOC – OU3 ROD	\$5,985,342
2006 AOC – OU6 TCRA	\$3,611,485
2007 ASAO – SRI/FS	\$21,527,062
2007 ASAO – Plainwell Dam TCRA	\$17,825,747
2007 AOC – Termination AOC	\$77,787
2008 AOC – Oversight Costs	\$1,845,000
2009 CD – OU2 ROD	\$15,628,976
2009 AOC – Plainwell Dam #2 TCRA	\$6,828,627
Other	(\$1,163,642)
Total	\$105,461,169

(TX 2617; TX 2598; TX 2599; TX 2600; TX 2601; TX 2602; TX 2603; TX 2604 TX 2605; TX 2606; TX 2607; TX 2608; TX 2609; TX 2610; TX 2611; TX 2612; TX 2613; TX 2614.)

461. GP’s claimed costs are: (i) barred by the statute of limitations; (ii) untimely disclosed; (iii) unrecoverable as inconsistent with the National Contingency Plan (“NCP”); (iv) subject to an offset based on GP’s settlement of claims against other parties, and/or (v) subject to an offset of Site-related insurance proceeds.

A. Statute of Limitations

462. NCR contends that all of GP’s claims (past and future costs) are time-barred for the reasons set forth in NCR’s and IP’s Joint Motion for Summary Judgment. (Dkt. No. 738).

463. In an Order dated August 12, 2015, the Court granted in part and denied in part NCR’s and IP’s motion, ruling that GP’s costs under the following settlement agreements with the government are time-barred: (i) OU3 costs arising under the 1990 AOC (\$5,960,704), (ii) 2000 OU3 AOC (\$5,985,342), (iii) 2006 ASAO (\$3,611,485), (iv) 2007 SRI/FS (\$21,527,062), (v) 2007 Plainwell ASAO (\$17,825,747). (Opinion and Order dated August 12, 2015 (Dkt. No. 787).) In addition, GP has also expressly conceded that an additional approximately \$6 million in costs are time-barred. (GP Mem. of Law in Opp’n to NCR’s and IP’s Joint Mot. for Summ. J., dated Apr. 16, 2015 (Dkt. No. 761), at 23 n.8 (“Georgia-Pacific concedes that it is time-barred from recovering costs associated with OU3”).)

464. Moreover, \$594,484.86 of GP’s costs incurred in 2006 for the work required by the 2006 ASAO but performed before that AOC was signed are time-barred. (TX 2601)

465. GP’s remaining costs under the 1990 AOC are time-barred. (TX 1003.)

465.1 The 1990 AOC resolved responsibility to the State of Michigan. The 1990 AOC provides that “[u]pon certification by MDNR that the Respondents have completed the RI/FS in accordance with this Order, MDNR covenants not to sue the Respondents

for completion of the RI/FS covered by the signed Record of Decision”. (TX 1003 ¶ 43.) The KRSG completed RI/FS work for OU3. (TX 5530 and 4961.) The MDEQ approved a Record of Decision for OU3 covering the RI/FS (TX 4112.)

465.2 The 1990 AOC was superseded and “replaced entirely” by the 2007 SRI/FS ASAO. (Zoch 2/26/2015 Dep. Tr. at 124:7-19.) And the 2007 SRI/FS ASAO is time-barred. (Order dated August 12, 2015 (Dkt. No. 787).)

B. Untimely Disclosures

466. GP cannot recover \$1.62 million in costs that it incurred pursuant to the 2008 AOC and \$73,816 in costs incurred under the 2007 AOC Termination Order, because these costs were not disclosed to defendants until after the close of fact discovery.

466.1 Pursuant to the Court’s order dated August 13, 2014, fact discovery in this litigation closed on November 14, 2014. (Amended Order Revising Case Schedule and Addressing Motions, dated Aug. 13, 2014 (Dkt. No. 542).)

466.2 On March 20, 2015, GP for the first time disclosed that it had incurred costs pursuant to a 2008 AOC or the 2007 Termination Order. (TX 12496). GP amended its cost claim to include \$1.62 million in costs incurred pursuant to the 2008 AOC. (*Id.*)

C. NCP Compliance

467. A substantial portion of GP’s claimed costs are unrecoverable as inconsistent with the NCP because (i) they were created outside the scope of government work orders and were unnecessary to either the EPA’s or MDEQ’s decision making (KRSG 2000 Supplement); (ii) they were incurred in performing cleanup activity improperly classified as time-critical (Plainwell Dam No. 2 Removal); (iii) they are either not “response costs” or were unrelated to PCB contamination; and (iv) they are not supported with proper documentation.

(1) KRSG’s 2000 Supplement

468. GP’s claim for past costs concerning the KRSG’s 2000 Supplement is unrecoverable because the Supplement was (i) created outside the scope of the 1990 AOC and was not subject to regulatory oversight and (ii) not necessary to either MDEQ’s or the EPA’s decision making. (Zelikson R. (1/30/2015) at 42-50 (TX 4512); Zelikson R. (3/27/2015) Schedule 4 Itemized Costs (TX 223).) GP has commingled its cost for the 2000 Supplement with its cost for the 2000 draft Remedial Investigation / Feasibility Study and is unable to meet its burden of separating this cost from the unrecoverable cost of the 2000 Supplement. As a result, and because the cost of the 2000 Supplement makes up the majority of the commingled cost, \$11.6 million of GP’s past costs are unrecoverable.

468.1 The KRSG’s 2000 Supplement comprised nine voluntary studies conducted at OU-5, as well as ecological and human health risk assessments, an update of the Site conceptual model, and a comprehensive sediment and PCB fate and transport model. (TX 12010; Zelikson R. (1/30/2015) at 42 (TX 4512).)

468.2 In addition, even after the KRSG submitted the 2000 RI/FS and the 2000 Supplement to Michigan DEQ, the KRSG continued to spend money on the same voluntary, unwanted studies, assessments, and related work until at least 2004. All of this work, both in preparing the 2000 Supplement and in continuing related work afterwards, is called the “Supplement Work.” (Zelikson R. (1/30/2015) at 41-42 (TX 4512).)

468.3 A small portion of GP’s cost for Supplement Work is identifiable because it involved several vendors that the KRSG employed and whose invoices reveal worked exclusively on the Supplement Work. These vendors are:

- Anchor Environmental (September 2001 – August 2004) – Anchor reviewed cleanup cost estimates and worked on a conceptual remedy. (Zelikson R. (1/30/2015) at 47 (TX 4512).) GP paid \$48,384 for this work. (Zelikson R. (3/27/2015) Schedule 1 (TX 223).)
- Arcadis (October 2000 – November 2001) – Arcadis worked on the ecological and human health risk assessments and also provided natural resource damages-related services (Zelikson R. (1/30/2014) at 48 (TX 4512)), for which GP paid \$30,878. (Zelikson R. (3/27/2015) Schedule 4 (TX 223).)
- Environ (November 1999) – Environ worked on the human health risk assessment (Zelikson (1/30/2015) at 48 (TX 4512)), for which GP paid \$2,662. (Zelikson R. (3/27/2015) Schedule 4 (TX 223).)
- JSA Environmental (December 1999) – JSA worked on the ecological risk assessment (Zelikson R. (1/30/2015) at 48 (TX 4512)), for which GP paid \$23,709. (Zelikson R. (3/27/2015) Schedule 4 (TX 223).)

468.4 Most of the cost of the Supplement Work was for work by BBL, the KRSG’s main contractor for both required work and Supplement Work. (Zelikson R. (1/30/2015) at 42 (TX 4512).) The BBL invoices for 1999 through 2004 do not allow one to separate the cost of the Supplement Work from the cost of the required work. (Zelikson R. (1/30/2015) at 42 (TX 4512).) GP did not make an effort to separate these costs. (Hilarides 7/10/2014 Dep. Tr. at 41:3-20, 104:3-7, 124:23-127:11 (TX 364); Montney 8/6/2014 Dep. Tr. at 86:19-87:11 (TX 371); Brown 7/24/2014 Dep. Tr. at 121:8-12 (TX 344).)

468.5 A significant portion of the OU 5 costs that BBL invoiced from February 1999 through May 2004 were for Supplement Work. (Zelikson R. (01/30/2015) at 48-49 (TX 4512).) In particular, he determined that the majority of the costs BBL invoiced from February 1999 to October 2000, for its own work and that of its subcontractors, were for Supplement Work. (Zelikson R. (01/30/2015) at 48-49 (TX 4512).) GP paid \$5.3 million for this time period. (Zelikson R. (01/30/2015) at 48-49 (TX 4512).) For November 2000 to May 2004, Mr. Zelikson determined that over 65 percent of BBL’s costs were for Supplement Work. (Zelikson R. (1/30/2015) at 49 (TX 4512).) In addition, during this latter time period, the KRSG owed no major deliverables to

Michigan DEQ at all, so it is reasonable to conclude that all of the cost for this period was for Supplement Work. (Zelikson R. (01/30/2015) at 49 (TX 4512).) GP paid \$6.2 million for this time period. (Zelikson R. (01/30/2015) at 49 (TX 4512).)

468.6 Because GP has not met its burden, as required in the National Contingency Plan (TX 5591) to document its costs adequately to allow the Court to separate the cost of conducting the Supplement Work from the cost of completing the required elements of the RI/FS that GP was obligated to produce, GP cannot recover the \$11.5 million of costs it incurred for BBL invoices that mix the Supplement Work and the required work. In addition, GP also cannot recover the \$100,000 of costs it incurred for the vendors who worked only on Supplement Work.

469. The KRSG's 2000 Supplement was created outside the scope of the 1990 AOC and was not subject to regulatory oversight. (Zelikson R. (1/30/2015) at 42-44 (TX 4512).)

469.1 Before preparing its 2000 Supplement, the KRSG was told by MDEQ that the agency did not believe any of the additional studies proposed for the supplement needed to be conducted and that the agency would have no involvement the supplement's development or review. (TX 12010 at -959; Zelikson R. (1/30/2015) at 44 (TX 4512).)

469.2 No government agency ever requested that KRSG prepare a numerical fate and transport model of the Site. (Limnotech 30(b)(6) 10/21/2014 Dep. Tr. at 32:13-16 (TX 373).)

469.3 In August 2000, the MDEQ directed the KRSG to keep any results or conclusions from the 2000 Supplement separate from the OU-5 RI/FS because they were "outside of the MDEQ-approved scope of work". (TX 12010 at -959; Zelikson R. (1/30/2015) at 44 (TX 4512).)

469.4 MDEQ refused to consider the data collected as part of the 2000 Supplement. (TX 12026; Zelikson R. (1/30/2015) at 44 (TX 4512).)

469.5 EPA also noted that "[b]ecause MDEQ prohibited the PRPs from using the fate and transport model they developed, the PRPs created an unauthorized Supplement to the RI/FS, which is referenced throughout the original document." (TX 11862 at -169-70; Zelikson R. (1/30/2015) at 46 (TX 4512).)

470. The KRSG's 2000 Supplement was not necessary to either MDEQ's or the EPA's decision making. (Zelikson R. (1/30/2015) at 45-46 (TX 4512).)

470.1 There is no documented record that MDEQ or EPA considered the 2000 Supplement necessary to its decision-making related at the Site. (Zelikson R. (1/30/2015) at 46 (TX 4512).)

470.2 In January 2001, the MDEQ stated in a letter to the KRSG that "[t]he scope of the [Supplemental Information] was not approved by MDEQ" and "the data [was] collected without oversight and [was] outside of the scope of Administrative Order of Consent (AOC). MDEQ further noted that the "[d]ocument's contents, what little

there is, can not be used for site investigation or evaluation purposes.” (TX 11861 at -972); Zelikson R. (1/30/2015) at 45 (TX 4512).)

470.3 In December 2001, MDEQ issued comments regarding the KRSG’s Supplemental RI/FS risk assessment work by Dr. Giesy, noting that the work was submitted outside the scope of the 1990 AOC, and recommending that the EPA not incorporate any of the concerns or suggestions made by Dr. Giesy. (Zelikson R. (1/30/2015) at 45 (TX 4512) (citing TX 12024 at -714).)

470.4 No document created by MDEQ has ever relied on the results of Limnotech’s fate and transport model. (See Limnotech 30(b)(6) 10/21/2014 Dep. Tr. at 33:25-34:3 (TX 373).)

470.5 EPA has never cited the results of Limnotech’s numerical fate and transport model. (See Limnotech 30(b)(6) 10/21/2014 Dep. Tr. at 88:2-4 (TX 373).)

(2) Plainwell No. 2 Dam Removal

471. Approximately \$6.8 million of GP’s claimed costs concerning the Plainwell No. 2 Dam removal action are unrecoverable because that removal action was conducted as a Time Critical Removal Action (“TCRA”) even though more than six months was available for planning, and the costs were therefore not incurred in substantial compliance with the NCP. (Zelikson R. (1/30/2015) at 27-40 (TX 4512).)

471.1 The Plainwell No. 2 Dam removal action was conducted as a TCRA between 2009 and 2010, and involved the excavation of 16,000 cubic yards of sediments and floodplains at a total cost of approximately \$8.6 million. (TX 11106 at -774, -778.)

471.2 TCRAs are reserved for situations in which environmental or public health requires immediate action. (TX 11859 at -896-97.)

471.3 In situations where a planning period of more than six months is available, non-time-critical removal actions (NTCRAs) are to be employed. (TX 11859 at -896-97.) A NTCRA requires an Engineering Evaluation/Cost Analysis (“EE/CA”) analyzing the removal alternatives for a site and public involvement in the remedy selection process. (TX 12015 at -012; TX 5591 at § 300.415(b)(4), (n)(4) (TX 12495).)

472. Contamination issues at the Plainwell No. 2 Dam area had been known for years prior to commencement of the TCRA. (Fortenberry 11/11/2014 Dep. Tr. at 119:15-17 (TX 357).)

472.1 As early as late 2007 or early 2008, the KRSG was proposing action at the Plainwell No. 2 dam area. (TX 11817 at -712.)

472.2 In October 2008, eight months before the implementation of the TCRA, the KRSG presented a proposal to the EPA and MDEQ to conduct several removal actions in OU5, including at the Plainwell No. 2 Dam area. (TX 11128 at -213.)

472.3 In November 2008, KRSB submitted a Conceptual Design Report for the Plainwell No. 2 Dam TCRA. (TX 11817.)

472.4 The Conceptual Design Report for the Plainwell No. 2 Dam TCRA indicated that the schedule for implementation of the TCRA would be dependent on discussions of the Design Report with the EPA, MDEQ and the Natural Resource Trustees. (TX 11817 at -734.) The Design Report did not indicate that the schedule would be dictated by time-sensitive threats to human health or the environment.

472.5 In February 2009, the EPA held a public meeting on the entire Superfund Site where it indicated that the Plainwell No. 2 Dam expedited work was “on hold” while the EPA evaluated the CERCLA authorities to pursue implementation of the project. (TX 11860 at -955.) The decision to put the TCRA on hold was six months prior to the eventual start of the TCRA.

472.6 In June 2009, the EPA authorized the TCRA. (EPA, “Enforcement Action Memorandum: Plainwell #2 Dam”, June 8, 2009, WY853538-58 (TX 12013).) The only justifications for the TCRA mentioned in the memorandum is “the contaminated nature of the sediment, the continuing release of contamination into the food chain, and potential exposure to the public”. (*Id.* at -539.) The justifications for the TCRA had been known or were ongoing for years prior to the authorization of the TCRA. (Zelikson R. (1/30/2015) at 37 (TX 4512).)

(3) Non-Response Costs

473. Approximately \$1.7 million of GP’s claimed past costs are unrecoverable because they are either not recoverable in this phase of the litigation or are not response costs under the NCP. (Zelikson R. (3/27/15) at 9, Schedule I (TX 223).) In addition, approximately \$7.4 million of GP’s claimed costs are not recoverable because they would have been incurred regardless of whether PCBs were present or they relate to cost-recovery actions.

473.1 GP’s claim for \$679,805 in NRD-Related costs are not recoverable in this phase of the stage of the litigation pursuant to the Court’s Order dated August 13, 2014, excluding NRD costs from Phase II. (Zelikson R. (3/27/15) at Schedules 1, 4.1, 4.2, 4.5, 4.6 (TX 223).)

473.2 GP’s claim for \$758,943 in advocacy-related costs are not recoverable because they are not response costs that were taken independently from any required cleanup action. (Zelikson R. (3/27/15) at Schedules 1, 4.3, 4.4 (TX 223).)

473.3 An additional \$236,785 of GP’s claimed past costs are unrecoverable because they are not response costs, including (i) donations to for animal testing (Zelikson R. (1/30/2015) at 59 (TX 4512).); (ii) costs related to an Outdoor Discovery Center (*id.* at 59); (iii) costs related to a commercial mortgage survey (*id.* at 59-60); and (iv) costs sponsoring research at the University of Ottawa (*id.* at 60). (Zelikson R. (3/27/15) at Schedules 1, 3.2, 4.6 (TX 223).)

473.4 Approximately \$7.4 million of GP's claimed costs are unrecoverable because they are related to the closure of the OU2 landfill that would have been incurred whether or not PCBs were present in the landfill. (Butler R. (12/5/2014) at 29-31, App. E3 (TX 165) (with costs no longer at issue removed); Butler 7/21/2015 R. at App. C1A, Table 5 (TX 171) (with costs no longer at issue removed).)

473.5 \$48,168 of GP's claimed costs are unrecoverable because they are related to cost-recovery activities. (Butler R. (12/5/2014) at 29-31, App. E (TX 165) (with costs no longer at issue removed); Butler R. (7/21/2015) at App. C1A, Table 5 (TX 171) (with costs no longer at issue removed).)

(4) Undocumented Costs

474. Approximately \$11.8 million of GP's claimed costs are unrecoverable because GP has either (i) inaccurately accounted for them, (ii) failed to provide sufficient documentation, or (iii) failed to provide proof that GP has paid those costs. (Rock R. (12/5/2014) at Ex. III (with costs no longer at issue removed).)

475. \$1,980,524 of costs GP has claimed in connection with the 1990 AOC are unrecoverable because GP has inaccurately accounted for the following costs or has provided defendants with insufficient documentation. (Rock R. (12/5/2014) at Ex. III (with costs no longer at issue removed).)

475.1 \$1,226,074 in costs claimed by GP lack sufficient documentation because GP submitted only a check request in support of the claimed costs.

475.2 \$14,813 in costs claimed by GP lack sufficient documentation because GP submitted only an invoice register in support of the claimed costs.

475.3 \$13,365 in costs claimed by GP lack sufficient documentation because GP submitted only a letter referencing the claimed amount without an invoice supporting the claimed costs.

475.4 \$21,373 in costs claimed by GP lack sufficient documentation because the documentation provided is incomplete or references costs other than those claimed by GP.

475.5 \$17,208 in costs claimed by GP lack sufficient documentation because their corresponding invoices are missing pages.

475.6 \$290,324 in costs claimed by GP lack adequate documentation because the invoice does not reference the Site or provide a clear description of the nature of the work performed.

475.7 \$396,444 in costs claimed by GP, lack sufficient documentation because only payment support and no invoices have been provided in support for the claimed amounts.

475.8 \$921.34 in costs claimed by GP were inaccurately accounted for because it differs from the amounts reflected in the supporting documentation.

476. \$49,518 of costs GP has claimed in connection with the 2007 Termination AOC are unrecoverable because GP has not provided defendants with sufficient documentation of those costs. (Rock R. (12/5/2014) at Ex. III (with costs no longer at issue removed).)

477. In addition, approximately \$9.8 million of GP's claimed costs are unrecoverable because GP did not provide absolute proof of payment of those costs. (Rock R (12/5/2014) at Ex. III (with costs no longer at issue removed).)

D. GP's Settlement Proceeds

478. Any recovery by GP must be offset by no less than \$1,743,512 in non-insurance settlement proceeds it has received from various parties in connection with environmental liabilities at the Site.

479. In 1998, GP and Fort James Corp. each received \$81,250 (together \$162,500) from the Rock-Tenn Company in connection with the Site. (TX 11777; TX 12287; TX 2615; TX 2616.)

480. In 2002, the KRSG obtained a judgment against Eaton Corporation in the amount of \$62,261.58 for costs the KRSG incurred under the 1990 AOC. (*See KRSG v. Eaton Corp.*, 258 F. Supp. 2d 736, 761 (W.D. Mich. 2003), *aff'd* 355 F.3d 574, 592 (6th Cir. 2004).)

481. In 2003, GP received \$1.5 million from the Mead Corporation and MeadWestvaco in connection with the Site. (TX 4991; TX 2615; *see* TX 12287.)

482. In 2007, GP received \$100,000 from Gould Paper Corporation (TX 11057; TX 2615; TX 12358).)

E. Insurance Offset

483. GP received at least \$70.82 million in proceeds from settlements with its insurers pursuant to policies that covered the Kalamazoo Site. (Mishkin R. (6/2/2015) at 5 (TX 4677).) The settlements released insurers from any and all Kalamazoo property damage and none of the \$70.82 million was allocated to other costs.

484. Any recovery by GP should be offset by the \$70.82 million in proceeds GP received. Under the principles set forth in *Friedland v. TIC-The Indus. Co.*, 566 F.3d 1203 (10th Cir. 2009), any amount of costs GP may recover in this action must be offset by the entire \$70.82 million of proceeds received by GP because none of the settlement agreements GP entered into with its insurers expressly allocated proceeds liabilities related to the Site.

485. Even if the entire \$70.82 million is not offset, \$11.14–21.3 million in proceeds need to be offset as the estimated value of insurance proceeds related to GP's liabilities at the Site. (Abraham R. (6/19/2015) at 4 (TX 163).)

485.1 GP's insurance expert calculated an offset of \$13.05 million. (Mishkin R. (6/2/2015) at 6 (TX 4677).)

486. From 1993 to the present, GP has entered into at least 8 settlement agreements with its insurers, pursuant to policies for the Kalamazoo Site, for which there is sufficient information to calculate an offset. (Abraham R. (1/30/2015) at A-1 (TX 161); Abraham R. (6/19/2015) (TX 163).)

486.1 GP executed all of the insurance settlements after it began to incur environmental remediation costs at the Site under the 1990 AOC. (Abraham R. (12/5/2014) at 14 (TX 160); Abraham R. (6/19/2015) (TX 163).)

487. The estimated value of Site-related proceeds of each settlement is as follows:

487.1 GP entered into a settlement with AIG in July 1995 for \$22.6 million. This settlement amounts to a maximum offset of \$9.848 million. (TX 11069; Abraham R. (12/5/2014) at 15-19 (TX 160).)

487.2 GP entered into a settlement with Lloyds/Equitas in December 2004 for \$18 million. This settlement amounts to a maximum offset of \$3.453 million. (TX 11068; Abraham R. (12/5/2014) at 21 (TX 160); Abraham R. (02/27/2015) at 1 (TX 162).)

487.3 GP settled with a group of 20 London Market Insurers ("LMI") in August 2005 for \$9,843,450.48. This settlement amounts to a maximum offset of \$1.037 million. (TX 11065); Abraham R. (5/12/2014) at 24 (TX 160); Abraham R. (02/27/2015) at 2 (TX 162).)

487.4 GP executed a settlement with Aetna in November 1995 for \$2 million. This settlement amounts to an offset of \$975,419. (TX 11070; Abraham R. (1/30/2015) at 5 (TX 161); Abraham R. (02/27/2015) at 2 (TX 162).)

487.5 GP executed a settlement with Hartford in November 1995 for \$9.45 million. This settlement amounts to a maximum offset of \$3.878 million. (TX 11076) (Abraham R. (1/30/2015) at 6, 8 (TX 161).)

487.6 GP executed a settlement with Travelers in July 1995 for \$5.6 million. This settlement amounts to a maximum offset of \$1.882 million. (TX 11077; Abraham R. (1/30/2015) at 9, 10 (TX 161).)

487.7 GP executed a settlement with INA in March 1994 for \$75,000. This settlement amounts to a maximum offset of \$75,000. (Mishkin R. (6/2/2015) at 15 (TX 4677).)

487.8 GP executed a settlement with Brittany Insurance Company in November 2013 for \$2.284 million. This settlement amounts to a maximum offset of \$76,678 (TX 11131; Abraham R. (6/19/2015) at 2 (TX 163).)

F. GP's Claimed Costs

488. After deducting costs that are time-barred pursuant to the Court's order dated August 12, 2015, other unrecoverable costs and GP's settlement proceeds, GP's recoverable claim is limited to \$21,342,162 before any offset for GP's insurance proceeds.

488.1 For OU2, GP's recoverable claim is \$12,887,27 (\$2,808,721 related to the 1990 AOC, \$565 related to the 2007 Termination AOC, \$9,719,919 related to the 2009 Consent Decree, and \$358,069 in costs classified by GP as 2007-2009 costs unrelated to an administrative order).

488.2 For OU5, GP's recoverable claim is \$7,301,797 (\$6,937,348 related to the 1990 AOC and \$197,153 related to the 2009 Plainwell AOC).

488.3 For the former OU6, the GP Mill Property, GP's recoverable claim is \$1,153,092 (\$1,150,075 related to the 1990 AOC and \$3,017 related to the 2007 Termination AOC).

Proposed Conclusions of Law

1. The Mill Parties seek to recover from NCR costs relating to the clean-up of PCB contamination at the Site. Specifically, GP seeks past costs in the amount of \$105,461,169, and future costs. IP and Weyerhaeuser seek future costs in the event that they are held liable for clean-up at the Site. Neither the claims nor counterclaims alleged against NCR have any merit.

2. To the extent that NCR can be held liable for clean-up costs, NCR's apportionable share of those clean-up costs is no more than 2%, as explained below. NCR's equitable share of the clean-up costs similarly is no more than 2%.

3. GP's claimed past costs are subject to a number of defenses and offsets, such that none of them can be recovered from NCR.

I. Apportionment / Divisibility

4. As an initial matter, while GP seeks past costs, it has failed to show that it has paid more than its equitable share, and therefore it is not entitled to any recovery for past or future costs from NCR.

5. To the extent that GP is able to recover clean-up costs from NCR, the alleged harm at the Site is apportionable, and NCR's divisible share of the alleged harm is no more than 2% based on the combination of factors discussed below.

6. An alleged harm is divisible or subject to apportionment where (i) it is theoretically capable of apportionment and (ii) there is a reasonable basis for apportionment. *See Burlington N. & Santa Fe Ry. v. United States*, 556 U.S. 599, 614 (2009).

7. Environmental harm is theoretically capable of apportionment where a party can show the extent to which it contributed to the alleged harm. *United States v. P.H. Glatfelter Co.*,

768 F.3d 662, 678 (7th Cir. 2014) (“[W]e think the harm would be theoretically capable of apportionment if NCR could show the extent to which it contributed to PCB concentrations in [the affected area].”) “[A] ‘reasonable basis for apportionment’ need not be mathematically precise, and may be based on the simplest of considerations,” *e.g.*, time and land areas.” *PCS Nitrogen Inc. v. Ashley II of Charleston LLC*, 714 F.3d 161, 183 (4th Cir. 2013) (quoting *Burlington N. Ry. Co. v. United States*, 556 U.S. 599, 617-18 (2009)). “Defendants’ burden may be met by showing that harm can be divided among them based on volumetric, chronological, or geographic considerations.” *United States Virgin Islands Dep’t of Planning and Natural Res. v. St. Croix Renaissance Group, LLLP*, No. 07-114, 2013 WL 5640720, at * 3 (D.V.I. Oct. 16, 2013).

8. Here, the alleged harm is theoretically capable of apportionment and there is a reasonable basis for apportioning NCR’s divisible share.

9. As a threshold matter, NCR had nothing to do with at least 25% of the PCB contamination at the Site. Aroclor 1242, the PCB used in CCP, accounts for only 75% of the PCBs found at the Site; the remaining 25% of PCBs are Aroclor 1254 and Aroclor 1260, which were PCBs used in various oils in heavy manufacturing and as dielectric fluids in electrical equipment as well as in adhesives, coatings and plasticizers, but never in CCP.

10. As to the PCBs that can be attributed to CCP, NCR’s contribution to the alleged harm can be measured based on: (i) PCB contamination arising from CCP recycled by the Kalamazoo Mills that came directly or indirectly from an entity affiliated with NCR, (ii) PCB contamination arising from CCP recycled after 1969 and (iii) transactions in CCP broke or trim for which there is alleged evidence demonstrating that it was the subject of an NCR-arranged transaction. Based on the combination of these factors, NCR’s share is less than 2%.

10.1 NCR’s apportionable share based on the CCP recycled by the Kalamazoo Mills that came directly or indirectly from an entity affiliated with NCR (while it was owned by NCR) is no more than 4.2%.

10.2 NCR’s apportionable share based on the amount of NAC recycled at the Site for which there is direct evidence linking the NAC to the Site is less than 1%.

10.3 NCR’s apportionable share based on the amount of PCBs released (from recycled CCP arising from any source) into the river after January 1, 1969 is 4.5%.

II. Equitable Allocation

11. When equitable factors are applied to the PCBs at the Site that NCR could be liable for, NCR’s equitable share is smaller still.

12. Even if the Court evaluates NCR’s share on the basis of equitable factors alone, NCR’s share is no more than 2% based on the combination of factors discussed below.

13. Courts consider a variety of equitable factors in allocating costs, including: “(1) the ability of the parties to demonstrate that their contribution to a discharge, release or disposal of a hazardous waste can be distinguished; (2) the amount of the hazardous waste

involved; (3) the degree of toxicity of the hazardous waste involved; (4) the degree of involvement by the parties in the generation, transportation, treatment, storage, or disposal of the hazardous waste; (5) the degree of care exercised by the parties with respect to the hazardous waste concerned, taking into account the characteristics of such hazardous waste; and (6) the degree of cooperation by the parties with the Federal, State or local officials to prevent any harm to the public health or environment”. *Centerior Serv. Co. v. Acme Scrap Iron & Metal*, 153 F.3d 344 at 354 (6th Cir. 1998) (abrogated on other grounds); *see also United States v. Davis*, 31 F. Supp. 2d 45, 63 (D.R.I. 1998) (noting “critical” equitable factors include (1) [t]he extent to which cleanup costs are attributable to wastes for which a party is responsible (2) [t]he party’s level of culpability, (3) [t]he degree to which the party benefitted from disposal of the waste, and (4) [t]he party’s ability to pay its share of the cost”).

14. Consideration of these factors (some but not all of which also bear on apportionment/divisibility, as discussed above) demonstrates that no more than a small share of any response costs at the Site should be allocated to NCR. Indeed, for the same reason that NCR’s divisible share is small, NCR should be allocated no more than a minimal share (and no more than 2%) of the PCB cleanup costs at the Site.

15. As stated, (i) NCR had nothing to do with 25% of the PCBs found at the Site because they were not from CCP; (ii) only a small fraction of the PCBs at the Site could have been arranged by NCR because the vast majority came from sources other than entities owned or operated by NCR; (iii) evidence that NCR arranged for the disposal of CCP at the Site corresponds to a small fraction of CCP recycled at the Site; and (iv) the vast majority of the PCBs from recycled CCP were discharged before March 1969, the date after which the Court found NCR to be an arranger.

16. While the foregoing factors alone merit a small equitable share for NCR, standard allocation analyses and other factors further demonstrate that NCR’s equitable responsibility for any apportionable share is smaller still, and that NCR’s allocable share should be small no more than 2%. Specifically:

16.1 While it is true that NCR manufactured CCP using PCBs sold by Monsanto from 1954-1971 (the “Production Period”), NCR acted in good faith. During the Production Period, no scientific literature identified the PCB used in CCP (Aroclor 1242) as an environmental hazard. When concerns about PCBs as a class of substances grew, NCR ceased using Aroclor 1242 before other manufacturers of PCB-containing products ceased their use of it, and before Aroclor 1242 was found to be an environmental hazard.

16.2 The Kalamazoo-area mills, most of which were owned and operated by the Mill Parties and none of which was owned or operated by NCR, knowingly polluted the Site for decades, and would have done so regardless of whether they knew that CCP contained PCBs. They discharged most of the PCBs present at the Site and knowingly and persistently violated government orders restricting paper mill pollution.

16.3 For decades the Mill Parties benefitted disproportionately from recycling CCP and their continued failure to implement adequate wastewater treatment practices.

16.4 The Mill Parties, unlike NCR, have long been identified by the government as potentially responsible parties at the Site, and in view of their long history of flouting government regulations and orders, overstate their cooperation with the government.

III. GP's Claimed Costs

17. Neither IP nor Weyerhaeuser seeks costs from NCR. GP seeks past and future costs incurred in connection with remediating the Site.

18. While GP seeks past and future costs, GP has failed to show that it has paid more than its equitable share; thus, it is not entitled to any recovery for past or future costs from NCR.

19. To the extent that GP can recover past and future costs from NCR, NCR contends that all of those costs are time-barred for the reasons set forth in NCR's and IP's Joint Motion for Summary Judgment. (Dkt. 738.)

20. Even if GP's claims for past and future costs are not time-barred in their entirety, GP still cannot recover the \$105,461,169 it seeks in past costs because certain of those costs are: (i) barred by the statute of limitations; (ii) barred because they were disclosed too late; (iii) unrecoverable as inconsistent with the National Contingency Plan ("NCP"); and/or (iv) subject to an offset based on either GP's settlement of claims against other parties or GP's settlement of claims with insurers.

21. Statute of Limitations. Approximately \$88.9 million in claimed past costs are unrecoverable because they are time-barred.

22. In an Order dated August 12, 2015, this Court held that \$54,910,340 of GP's claimed past costs are time-barred.

23. GP expressly conceded that an additional \$5,985,342 of claimed past costs relating to OU3 are time-barred.

24. Moreover, \$594,485 of GP's costs incurred in 2006 for the work required by the 2006 ASAOC but performed before that AOC was signed are time-barred.

25. Of GP's costs remaining following the Court's Order, \$27,373,583 of claimed past costs related to the 1990 AOC are time-barred because the AOC was superseded and "replaced entirely" by the 2007 SRI/FS ASAOC, which qualifies as an administrative settlement under *Hobart*, and which became "effective" on February 21, 2007—outside the three year statute of limitations. *See Hobart Corp. v. Waste Mgmt. of Ohio, Inc.*, 758 F.3d 757, 775 (6th Cir. 2014).

26. Untimely Disclosures. Approximately \$1.62 million in claimed past costs are unrecoverable because they were untimely disclosed.

27. GP cannot recover the \$1.62 million in costs it claims it incurred pursuant to the 2008 AOC and the \$73,816 in costs it claims incurred under the 2007 AOC Termination Order, because these costs were not disclosed to defendants until after the close of fact discovery.

28. NCP Compliance. Approximately \$51.15 million in GP's claimed past costs are unrecoverable as inconsistent with the NCP because (i) they were created outside the scope of government work orders and were unnecessary to either the EPA's or MDEQ's decision making (KRSR 2000 Supplement); (ii) they were incurred in performing cleanup activity improperly classified as time-critical (Plainwell Dam No. 2 Removal); (iii) they are either not "response costs" or were unrelated to PCB contamination; and (iv) they are not supported with proper documentation.

29. To be recoverable as a response cost under CERCLA, the costs must be both "necessary" and "consistent with the NCP". *Reg'l Airport Auth. of Louisville v. LFG, LLC*, 460 F.3d 697, 703 (6th Cir. 2006) (internal quotation marks omitted). A party seeking recovery under CERCLA bears the burden of providing documentation that sufficiently demonstrates that its claimed costs were in fact "response costs" that were "incurred". *See, e.g.*, 40 C.F.R. § 300.160(a)(1); *California v. Neville Chem. Co.*, 213 F. Supp. 2d 1115, 1133 (C.D. Cal. 2002) ("[T]he NCP . . . mandates that a party claiming costs pursuant to CERCLA collect and maintain documents sufficient to provide an accurate accounting of costs incurred."); *Boeing Co. v. Cascade Corp.*, 920 F. Supp. 1121, 1133 (D. Or. 1996) (same).

30. Approximately \$11.6 million of GP's claimed past costs relating to the KRSR's 2000 Supplement were not necessary costs, and therefore are unrecoverable, given that the Supplement was (i) created outside the scope of the 1990 AOC and was not subject to regulatory oversight and (ii) not necessary to either MDEQ's or the EPA's decision making.

31. Approximately \$6.8 million of GP's claimed past costs relating to the Plainwell No. 2 Dam removal action were not incurred in substantial compliance with the NCP, and therefore are not recoverable, given that the removal action was wrongly conducted as a Time Critical Removal Action ("TCRA"). More than six months of planning were available and the action should have been conducted as a Non-Time-Critical Removal Action, which would have required GP to prepare an Engineering Evaluation / Cost Analysis and to get public comment on the remedy, both of which GP failed to do.

32. Approximately \$1.7 million of GP's claimed past costs are not recoverable in this phase of the litigation or are not response costs under the NCP.

33. Approximately \$7.4 million of GP's claimed past costs are not recoverable because they would have been incurred regardless of whether PCBs were present or they relate to cost-recovery actions.

34. Approximately \$11.8 million of GP's claimed past costs are unrecoverable because GP has (i) inaccurately accounted for them, (ii) failed to provide sufficient documentation or (iii) failed to provide proof that GP has paid those costs.

35. Approximately \$2.0 million of GP's claimed past costs in connection with the 1990 AOC are unrecoverable because GP has inaccurately accounted for certain costs or has provided defendants with insufficient documentation.

36. \$49,518 of costs GP has claimed in connection with the 2007 Termination AOC are unrecoverable because GP has not provided defendants with sufficient documentation of those costs.

37. Approximately \$9.8 million of GP's claimed past costs are unrecoverable because GP did not provide absolute proof of payment of those costs.

38. Settlements and Insurance Proceeds. Any costs recoverable by GP in this action must be offset by approximately \$72.6 million based on GP's settlements with various other parties and insurance proceeds.

39. CERCLA explicitly prohibits double recovery. 42 U.S.C. § 9614(b). If a party has already been reimbursed for a particular cost, that party is not permitted to recover that same amount from someone else. *See, e.g., Friedland v. TIC-The Indus. Co.*, 566 F.3d 1203, 1206-07 (10th Cir. 2009).

40. Under *Friedland*, GP is not able to recover \$72,635,237 from the other parties, including NCR, as GP already has been reimbursed this amount from non-insurance settlement proceeds and insurance settlements.

35. In particular, GP has been reimbursed \$1,743,512 from non-insurance settlement proceeds from various parties in connection with environmental liabilities at the Site. And GP already has been reimbursed \$70,820,940 million from proceeds from settlements with its insurers pursuant to policies that cover the Site.

36. Even if the entire \$70,820,940 that GP received from settlements with its insurers is not subject to an offset (which it is), GP's recoverable costs would still be subject to an offset of \$21,301,516 from proceeds from its insurers. That figure represents the estimated value of insurance proceeds related to GP's liabilities at the Site.

Addendum A**Recycled CCP by Source (lbs)**

Year	Post-Consumer	Independents	Mead	Systemedia	ACPC	CPM	Nekoosa	Total
1954	0	131,242		10,937	54,880			197,058
1955	107,806	1,458,052	353,192	121,504	370,440			2,410,994
1956	1,203,675	3,020,674	902,580	251,723	651,700			6,030,351
1957	2,550,800	3,240,800	805,952	270,067	809,206			7,676,824
1958	2,834,700	4,298,046	998,620	358,170	1,120,787			9,610,323
1959	3,764,739	5,644,945	1,392,972	470,412	1,416,864			12,689,932
1960	4,950,160	6,704,011	1,643,068	558,668	1,690,304			15,546,211
1961	5,921,094	8,254,737	2,096,808	687,895	2,031,383			18,991,917
1962	7,293,727	9,625,809	2,250,080	802,151	2,500,882			22,472,649
1963	8,540,144	11,200,359	2,712,248	933,363	2,846,214			26,232,329
1964	9,956,183	13,508,634	3,586,016	1,125,720	3,219,535			31,396,088
1965	11,985,438	16,788,447	4,173,820	1,399,037	4,192,832			38,539,574
1966	14,851,375	19,627,848	4,690,476	1,635,654	5,030,164			45,835,517
1967	17,419,178	22,557,891	4,616,192	1,879,824	6,305,712			52,778,797
1968	20,073,274	27,060,367	4,709,096	2,255,031	8,125,533			62,223,300
1969	24,028,992	28,408,356	4,572,876	2,367,363	8,781,486			68,159,072
1970	25,470,246	29,785,355	4,835,124	2,482,113	8,147,602	930,262	101,777	71,752,479
1971	26,829,763	5,717,004	965,888	476,417	1,357,966	253,901	124,445	35,725,384
1972	7,236,238							7,236,238
1973	1,530,101							1,530,101
1974	764,052							764,052
1975	380,822							380,822
1976	188,915							188,915
1977	92,708							92,708
1978	44,343							44,343
1979	19,760							19,760
1980	7,348							7,348
1981	1,019							1,019
Total	198,046,599	217,032,576	45,305,008	18,086,048	58,653,489	1,184,162	226,222	538,534,104
% of Total	36.78	40.30	8.41	3.36	10.89	0.22	0.04	100

(Wittenbrink R. (2/27/2015) at App. B, Ex. D (TX 2484).)

Addendum B**Estimated Amounts of CCP Recycled by the Kalamazoo Mills (tons)**

	Fountain Street	Angell Street	Rex	Hawthorne	National Gypsum	King	Kalamazoo Paper Company	Bryant	Monarch	Sutherland	Kalamazoo Vegetable Parchment	Hamilton (Plainwell)	Otsego (menasha)	Mac Sim Bar	Total
Year	CCP Recycled	CCP Recycled	CCP Recycled	CCP Recycled	CCP Recycled	CCP Recycled	CCP Recycled	CCP Recycled	CCP Recycled	CCP Recycled	CCP Recycled	CCP Recycled	CCP Recycled	CCP Recycled	CCP Recycled
1954	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1955	0.94	0.75	2.75	0.13	0.55	22.04	220.64	18.18	10.35	16.15	0.00	8.16	0.00	2.44	303.09
1956	2.14	1.53	8.16	0.28	1.14	124.44	255.97	86.95	56.37	34.64	0.00	16.33	0.00	5.08	593.03
1957	2.27	1.83	6.24	0.33	1.22	132.16	257.88	97.13	9.69	38.17	0.00	16.01	0.14	5.92	568.99
1958	2.93	2.37	11.29	0.47	1.58	146.01	287.41	139.30	0.00	48.04	0.00	22.70	0.18	7.67	669.95
1959	3.56	2.88	12.62	0.57	1.92	221.16	300.93	172.85	0.00	58.35	0.00	30.12	0.22	9.31	814.49
1960	4.43	3.58	17.01	0.71	2.38	264.89	341.97	205.77	0.00	72.49	0.00	38.82	0.27	11.57	963.89
1961	5.45	4.41	20.98	0.88	2.93	309.53	387.07	176.36	0.00	89.26	0.00	49.68	0.34	14.25	1061.11
1962	6.28	5.08	24.16	1.01	3.37	392.02	402.02	241.24	0.00	99.84	0.00	65.13	0.39	16.41	1256.96
1963	6.93	5.60	18.49	1.45	3.72	435.25	421.23	126.95	0.00	105.69	0.00	2.66	0.43	18.11	1146.52
1964	8.19	6.63	31.52	1.71	4.40	517.65	469.50	301.96	0.00	123.77	0.00	3.18	0.50	21.41	1490.42
1965	9.77	7.91	37.62	2.05	6.23	254.41	527.80	356.18	0.00	149.85	0.00	3.85	0.60	25.55	1381.83
1966	10.99	8.89	0.00	2.30	5.91	0.00	582.51	403.22	0.00	157.37	0.00	5.21	0.68	16.28	1193.36
1967	13.02	10.53	0.00	3.04	7.26	0.00	654.33	361.20	0.00	173.77	0.00	6.38	0.83	27.63	1257.99
1968	14.96	12.11	0.00	2.53	8.44	0.00	208.09	471.27	0.00	164.28	0.00	0.00	0.96	19.65	902.28
1969	15.07	12.20	0.00	2.83	8.28	0.00	369.81	508.45	0.00	148.76	0.00	6.15	8.34	19.54	1099.43
1970	15.25	12.34	0.00	3.24	8.93	0.00	390.68	581.36	0.00	115.90	0.00	6.63	9.27	19.15	1162.74
1971	5.13	4.15	0.00	1.02	2.78	0.00	194.44	122.71	0.00	42.88	0.00	2.18	3.00	7.56	385.84
1972	1.56	1.26	0.00	0.00	0.85	0.00	0.00	0.00	0.00	13.26	0.00	0.00	0.95	2.42	20.30
1973	0.55	0.44	0.00	0.00	0.26	0.00	0.00	0.00	0.00	4.28	0.00	0.00	0.30	0.85	6.68
1974	0.17	0.14	0.00	0.00	0.04	0.00	0.00	0.00	0.00	1.15	0.00	0.00	0.10	0.29	1.90
1975	0.05	0.04	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.04	0.06	5.07
1976	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.01	0.03	2.43
1977	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.35
1978	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
1979	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1980	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1981	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	129.66	104.69	190.86	24.55	72.20	2819.56	6272.27	4371.08	76.40	1658.02	0.00	283.18	27.54	251.20	

(See Scott R. (2/27/2015) at Ex. 1)

Addendum C

Estimated Discharges of Aroclor 1242 by the Kalamazoo Mills (lbs)

Year	Total		Bryant		Monarch		Kalamazoo		King		Mac Sim Bar		Otsego		Nat'l Gypsum		Hawthorne		Sutherland		Fountain		Angell		Hamilton		Rex		KVP	
	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill	Total PCBs to River	Total PCBs to Landfill
1954	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	4,989	6,688	0	0	302	305	3,306	5,721	928	299	5	2	0	0	1	17	4	2	67	141	3	5	4	5	300	69	69	122	0	0
1956	10,288	15,787	1,639	1,446	1,760	1,721	3,822	6,761	2,334	4,603	15	24	0	0	2	41	8	5	133	322	10	21	8	7	367	468	191	368	0	0
1957	10,675	17,569	3,113	3,318	263	333	3,853	6,976	2,855	5,343	18	31	3	2	3	53	9	6	136	380	7	9	10	13	258	818	146	285	0	0
1958	11,952	21,649	3,486	4,286	0	0	4,715	10,252	2,941	4,766	24	40	4	3	4	69	12	10	150	386	13	21	13	17	364	1,252	226	546	0	0
1959	13,259	26,381	2,703	6,397	0	0	4,798	10,792	4,828	6,291	29	49	5	4	5	85	15	12	172	259	5	37	5	32	475	1,788	220	635	0	0
1960	17,164	29,705	2,285	8,471	0	0	5,280	12,480	8,626	5,781	36	61	7	5	6	105	19	15	240	291	6	46	6	39	354	1,560	301	851	0	0
1961	18,349	35,608	2,500	6,347	0	0	5,846	14,304	7,986	11,970	44	74	8	6	7	127	23	18	311	399	7	56	7	48	560	1,888	1,050	370	0	0
1962	16,545	39,929	5,838	5,299	0	0	6,061	14,830	3,195	15,112	52	88	10	7	8	154	27	21	340	436	9	67	8	57	564	2,652	433	1,205	0	0
1963	16,796	39,346	544	4,744	0	0	6,217	15,729	9,103	16,751	58	97	11	8	9	173	35	33	436	721	10	75	9	63	33	30	331	921	0	0
1964	18,220	47,335	2,525	11,726	0	0	6,895	17,444	6,505	16,351	45	137	13	9	11	200	41	39	501	717	11	87	11	74	35	40	1,629	509	0	0
1965	16,023	43,606	4,850	13,675	0	0	7,588	19,830	1,928	6,678	73	142	15	11	12	233	49	47	767	821	13	102	12	87	48	101	668	1,880	0	0
1966	12,467	41,125	3,203	17,043	0	0	8,208	22,134	0	0	56	82	19	10	14	269	55	53	818	1,227	15	117	14	99	65	90	0	0	0	0
1967	8,339	46,568	2,314	15,193	0	0	5,186	28,738	0	0	52	181	22	12	9	331	36	107	617	1,633	13	141	13	120	77	111	0	0	0	0
1968	3,339	30,998	1,998	18,393	0	0	965	9,845	0	0	55	107	25	13	5	376	15	103	243	1,871	17	156	16	132	0	0	0	0	0	0
1969	3,579	37,715	580	17,505	0	0	2,174	17,099	0	0	110	222	187	435	7	392	23	110	375	1,560	26	156	25	132	71	102	0	0	0	0
1970	2,723	44,340	320	22,766	0	0	1,755	18,624	0	0	40	74	270	672	6	424	20	132	228	1,279	20	163	20	138	43	66	0	0	0	0
1971	1,867	26,043	141	8,755	0	0	1,374	15,753	0	0	49	106	156	388	3	245	7	45	92	544	10	87	10	73	24	47	0	0	0	0
1972	147	673	0	0	0	0	7	61	0	0	10	57	71	177	2	111	1	3	43	193	6	35	5	30	3	7	0	0	0	0
1973	40	198	0	0	0	0	2	18	0	0	2	10	21	52	1	33	0	1	11	63	2	12	2	10	0	0	0	0	0	0
1974	15	61	0	0	0	0	1	7	0	0	1	4	8	19	0	6	0	0	4	17	1	4	1	3	0	1	0	0	0	0
1975	5	29	0	0	0	0	0	4	0	0	0	1	3	9	0	3	0	0	1	9	0	2	0	1	0	0	0	0	0	0
1976	3	21	0	0	0	0	0	4	0	0	0	1	2	5	0	2	0	0	1	8	0	1	0	1	0	0	0	0	0	0
1977	1	10	0	0	0	0	0	3	0	0	0	0	1	2	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0
1978	0	3	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	3	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	186,788	551,389	38,041	165,365	2,325	2,359	78,056	247,412	51,229	93,945	772	1,592	861	1,852	115	3,448	398	764	5,685	13,281	204	1,403	197	1,182	3,642	11,092	5,263	7,694	0	0

(See Allen R. (2/27/2015) at App. C, D)

Addendum D

CCP Broke and Trim Are Useful Products

41. The Coating Companies considered CCP broke to be a valuable asset.

41.1 Dale Schumaker, who was manager of coating operations at ACPC from 1967 to 1970 and later became CEO of the company, described broke as “an asset”. (Schumaker 11/2/2011 Dep. Tr. at 11:18-21, 12:15-13:3, 18:12-22 (TX 11).)

41.2 Floyd Strelow, an ACPC purchasing agent and manager who was directly involved in selling broke at ACPC from 1958 to 1971, testified that ACPC “always considered [CCP broke] an asset because it had value”. (Strelow, Phase I Tr. at 924:20-925:1, 926:3-17, 928:14-18.)

41.3 Robert Hietpas, who worked as an accountant at ACPC from 1958 until long after 1971, similarly testified that broke was always considered a current asset of the company. (Hietpas, Phase I Tr. at 954:9-955:23, 959:25-960:5.)

41.4 GP’s expert, Dr. Robert Dolan, acknowledged that ACPC executives and other employees considered CCP broke to be a valuable asset of the company. (Dolan, Phase I Tr. at 817:23-818:11.)

42. The Coating Companies treated CCP broke as a valuable asset by investing resources and time in handling and selling it.

42.1 It is undisputed that the Coating Companies had various procedures for handling broke and preparing it for shipment. (Phase I PTO at 5-6, ¶¶ 28, 42, 54.)

42.2 ACPC’s broke handling procedures, which Mr. Strelow described as “fairly elaborate” (Strelow, Phase I Tr. at 927:3-5; *see also* Cornell, Phase I Tr. at 1000:8-1001:2), included the following:

- Collecting (Strelow, Phase I Tr. at 926:18-23);
- Sorting and grading (*id.*);
- Baling (Schumaker 11/2/2011 Dep. Tr. at 18:1-3 (TX 11));
- Storing and protecting (Strelow, Phase I Tr. at 927:9-12); and
- Inventorying (Christensen 3/25/2009 Dep. Tr. at 40:14-23 (TX 13).)

42.3 These procedures are further explained in a formal July 1966 ACPC interoffice memorandum concerning ACPC’s “broke inventory, shipping and billing procedure”. (TX 3000 at 1.)

42.4 In addition to the steps listed above, the memorandum discusses daily, weekly and semi-annual broke inventory reports; broke shipping orders; broke loading procedures; shipping documentation (including bills of lading); and billing procedures. (TX 3000 at 2-5.)

42.5 That the memorandum is addressed to 10 ACPC employees, including two vice presidents, shows that broke procedures were important to ACPC. (*See* Schumaker 11/2/2011 Dep. Tr. at 23:4-8, 23:14-16 (TX 11); Cornell, Phase I Tr. at 1003:8-1004:15; *see also* TX 3000.)

42.6 These broke handling procedures required an investment of physical resources (such as baling equipment and storage space) and employee time. (Strelow, Phase I Tr. at 927:6-12.)

42.7 For example, in one month in 1968, ACPC devoted over 1,288 man hours to baling its broke. (TX 3364 at -828.)

42.8 GP's paper industry expert testified, the various broke procedures—such as segregating, sorting and baling—“[c]ertainly” took “time, money, and effort”. (Klass, Phase I Tr. at 608:18-24.)

42.9 The *Whiting* court found that ACPC “invested capital in broke and devoted economic resources to its collection and sale”. *Whiting*, 2012 WL 2704920, at *9. The court thus concluded that “ACPC treated the product as something of value and took care to maximize the value it would receive upon sale”. *Id.*

42.10 Professor Bradford Cornell, who has taught about various economics issues for about 35 years, testified that the Coating Companies' investment of time and resources in CCP broke reveals what they “fundamentally believe[d]”—that broke was a valuable asset that generated important revenue. (Cornell, Phase I Tr. at 993:11-994:9, 1018:12-18.)

42.11 Dr. Dolan could not identify any material differences between ACPC and the other Coating Companies in terms of their broke handling procedures. (Dolan, Phase I Tr. at 823:9-21; *see also, e.g.*, Montgomery 3/26/2012 Dep. Tr. at 28:2-9 (TX 52) (describing Mead's procedures).)

43. The Coating Companies undertook the various broke handling procedures to maximize the revenue that they could receive from selling broke. (Cornell, Phase I Tr. at 1000:8-1001:13, 1005:4-17.)

43.1 Mr. Schumaker testified that ACPC's management was concerned with broke handling procedures because management wanted to maximize the return that ACPC could get on its broke sales. (Schumaker 11/2/2011 Dep. Tr. at 39:4-7 (TX 11); *see id.* at 19:19-20:1, 20:22-24.)

43.2 Professor Cornell explained that the various broke handling procedures were part of a profitable sub-business for the Coating Companies—the business of selling broke, which “added to the bottom line” of the Coating Companies throughout the Production Period. (Cornell, Phase I Tr. at 998:10-18, 999:9-20; *see* TX 4037 (listing broke handling procedures as bases for his opinion).)

43.3 Employees at the recycling mills that ultimately purchased broke for use in making new paper understood that the broke sellers (such as the Coating Companies) sorted and graded the broke “to maximize the prices that they could get for each particular grade”. (Bergstrom 9/27/2011 Dep. Tr. at 36:23-37:3 (TX 78).)

43.4 Even Dr. Dolan admitted that the Coating Companies’ broke handling procedures were undertaken “to prepare for the sale of broke, to get value for it”. (Dolan, Phase I Tr. at 822:19-21.) Dr. Dolan further testified that the Coating Companies’ investment of time and resources in handling broke “pushes [him] at least in the direction of broke being a useful product rather than a waste”. (*Id.* at 823:22-824:1.)

43.5 The *Whiting* court found that “sorting and grading the broke allowed ACPC to maximize the value it could obtain in the broke marketplace”. *Whiting*, 2012 WL 2704920, at *2. Indeed, the Court found that “[i]t was not contested that ACPC spent significant effort and expense to get the most out of its broke”. *Id.* at *10.

44. The Coating Companies did not treat broke as trash or worthless waste to be discarded.

44.1 Mr. Schumaker testified that CCP broke had value and that it was not treated like trash: “[T]rash we paid somebody to haul away. Broke we got paid for.” (Schumaker 11/2/2011 Dep. Tr. at 18:4-8, 24:13-16 (TX 11).)

44.2 Other ACPC employees confirmed that ACPC never discarded or incinerated its CCP broke. (*See, e.g.*, Schumaker 11/2/2011 Dep. Tr. at 18:12-22 (TX 11); Strelow, Phase I Tr. at 944:8-9; Bodmer 3/16/2009 Dep. Tr. at 223:25-224:3 (TX 15); Christensen 3/25/2009 Dep. Tr. at 24:22-25:1 (TX 13); *see also* Cornell, Phase I Tr. at 1001:18-19 (concluding CCP broke “was clearly not something that was simply being disposed of”).)

45. The Coating Companies always sold their CCP broke.

45.1 It is undisputed that each of the Coating Companies always sold the broke they produced, including CCP broke, to paper stock brokers. (Phase I PTO at 5-6, ¶¶ 29, 43, 55; *see also Whiting*, 2012 WL 2704920, at *12 (finding that ACPC “always sold the broke, rather than sometimes sending it to a landfill or otherwise disposing of it”); Dolan, Phase I Tr. at 738:23-739:9 (acknowledging that CPM sold its broke to brokers); Montgomery 3/26/2012 Dep. Tr. at 30:3-18 (TX 52) (testimony by former Mead manager that Mead always sold its broke).)

46. Broke sales generated important revenue for the Coating Companies.

46.1 It is undisputed that the CCP broke sales generated revenue for the Coating Companies. (Phase I PTO at 5-6, ¶¶ 30, 56; *see* Christensen 3/25/2009 Dep. Tr. at 53:4-8 (TX 13) (selling broke was a “revenue-generating part of [ACPC’s] business”); Hietpas, Phase I Tr. at 966:5-10, 967:7-13 (broke sales “absolutely” generated revenue for ACPC throughout the Production Period).)

46.2 The revenue generated by selling broke was an “important contributor to [ACPC’s] bottom line”. (Strelow, Phase I Tr. at 927:13-17; *see* Schumaker 11/2/2011 Dep. Tr. at 104:24-105:3, 108:14-20 (TX 11).) Broke sales were part of “a profitable ongoing business that added to the bottom line of the [Coating Companies]” throughout the Production Period. (Cornell, Phase I Tr. at 998:10-18.)

46.3 Dr. Dolan acknowledged that broke sales generated millions of dollars in revenue for the Coating Companies and that their management “should and did pay attention” to those revenues. (Dolan, Phase I Tr. at 825:13-826:7; *see* Schumaker 11/2/2011 Dep. Tr. at 105:4-14 (TX 11) (revenue from CCP broke sales was important to ACPC management, who “talked about it constantly”).)

46.4 As the *Whiting* court found, “ACPC’s broke was an important, if small, component of its business model, a consistent and predictable way to mitigate production losses.” *Whiting*, 2012 WL 2704920, at *10. “Selling broke was, in short, part of ACPC’s business model.” *Id.*

47. The Coating Companies accounted for broke inventory and broke sales in their financial statements throughout the Production Period.

47.1 For broke that had been produced but not yet sold, ACPC listed the broke inventory as a current asset before, during and after the Production Period. (Hietpas, Phase I Tr. at 956:22-957:4, 959:1-960:8; Grabow 3/28/2012 Dep. Tr. at 179:2-7 (TX 55).) Dr. Dolan admitted that all of the Coating Companies would have accounted for broke as an asset, rather than as a liability. (Dolan, Phase I Tr. at 822:5-9.)

47.2 Revenue from broke sales was also always recorded for accounting purposes. (Hietpas, Phase I Tr. at 956:8-10, 960:15-962:22; *see also* TX 1942 at -460 (listing “Profit on Broke Sales” under “Operating Sales Accounts”); TX 3489 at -530 (showing over \$145,000 in revenue from broke sales in 1964); TX 3366 at -394 (showing over \$200,000 in revenue from broke sales in 1969).)

47.3 Dr. Dolan admitted that if a company records the revenue of a product in the sales line of a profit and loss statement—as ACPC did with broke revenue for much of the Production Period—that that “would be consistent with a useful product”. (Dolan, Phase I Tr. at 824:23-825:3; TX 3489 at -530 (1964 ACPC profit and loss statement listing broke revenue under “Gross Sales”)); *see also Whiting*, 2012 WL 2704920, at *2.

47.4 Mr. Hietpas also testified that ACPC always used a sales account number for broke throughout the Production Period, just as it did with other products that it sold. (Hietpas, Phase I Tr. at 964:22-966:4; *see* TX 3365 at -550 (listing the broke sales account number).)

48. The Coating Companies accounted for broke sales the same way they accounted for other products, including finished CCP.

48.1 For accounting purposes, there was no difference between how ACPC treated broke and finished goods. (Hietpas, Phase I Tr. at 959:16-960:8, 963:24-964:1, 965:11-14.) As Mr. Hietpas testified, revenue from broke sales was “treated exactly the same” as revenue from sales of other products— “[a]ll of the sales items were sales to customers”. (*Id.* at 962:18-22.)

48.2 Dr. Dolan agreed that CCP broke got the exact same financial treatment as finished CCP on ACPC’s balance sheet. (Dolan, Phase I Tr. at 820:13-22.)

49. CCP broke sales yielded revenue that exceeded the production costs.

49.1 James Grabow, who worked in ACPC’s accounting department during and after the Production Period, described CCP broke as a valuable by-product of ACPC’s CCP production process. (Grabow 3/28/2012 Dep. Tr. at 10:8-11:14, 180:18-181:8 (TX 55).)

49.2 Mr. Hietpas, who spent decades as an accountant at ACPC, explained that ACPC did not separate the costs of producing CCP broke and perfect CCP. (Hietpas, Phase I Tr. at 966:11-13.) While there were two revenue streams, there was only “one stream of costs” flowing from the CCP production process. (*Id.* at 966:11-967:6; *see also* Grabow 3/28/2012 Dep. Tr. at 56:16-57:11 (TX 55).)

49.3 GP’s expert, Dr. Dolan, testified that the Coating Companies’ broke, including CCP broke, was a “byproduct” or “joint output of the [CCP] production process”. (Dolan, Phase I Tr. at 826:15-18.) Dr. Dolan also admitted that CCP broke is properly called a “product” using his classroom definition of that term—rather than his litigation definition. (*Id.* at 865:16-866:6.)

49.4 Dr. Dolan further testified that, “from a business perspective”, the production of CCP broke should be considered together with the production of the finished CCP product—“given that the two are part of the same process”. (Dolan, Phase I Tr. at 771:14-19, 826:15-827:13.) Thus, in Dr. Dolan’s opinion as a business expert, there was “an economic foundation” for the Coating Companies’ production of CCP broke and finished CCP. (*Id.* at 827:2-13.)

49.5 Professor Cornell testified that, “from an economic standpoint”, CCP products and broke are “a joint product”. (Cornell, Phase I Tr. at 1017:4-13.)

49.6 Professor Cornell opined that it “doesn’t make sense” to consider the cost of producing CCP alone; instead, he considered “whether the joint products together justify the cost of making both”. (Cornell, Phase I Tr. at 1016:15-1017:13.)

49.7 He found that the Coating Companies would not have sold CCP broke for some or all of the 17-year Production Period unless the revenue generated from those sales exceeded the cost of selling it—that is, unless the sales “added to their bottom line”. (Cornell, Phase I Tr. at 1001:14-1002:5.)

50. The Coating Companies sold CCP broke for the purpose of generating revenue, not disposing of a hazardous substance.

50.1 Mr. Schumaker explained why ACPC sold its broke:

“Q. Okay. So can you tell me, Mr. Schumaker, when Appleton Coated Paper Company sold broke, was it disposing of trash or trying to generate revenue?

“A. We were definitely generating revenue.”
(Schumaker 11/2/2011 Dep. Tr. at 24:22-25 (TX 11).)

50.2 Mr. Hietpas similarly testified that ACPC sold broke because it generated “a revenue stream”, not to dispose of a waste. (Hietpas, Phase I Tr. at 976:22-977:2.)

50.3 This explanation was echoed by Mr. Strelow, who testified that ACPC invested time and resources in preparing and selling broke because “the sale of the broke was an important contributor to our bottom line”. (Strelow, Phase I Tr. at 927:13-17.) Mr. Strelow further testified that ACPC never sold CCP broke for the purpose of disposing of a waste. (*Id.* at 928:19-22.)

50.4 The *Whiting* court agreed, finding that “[a]bove all else, financial considerations were the driving force” for why ACPC sold CCP broke. *Whiting*, 2012 WL 2704920, at *9.

51. Throughout the Production Period, there was a well-established market for the purchase and sale of broke. (*See* Phase I PTO at 8, ¶ 84.)

51.1 There has been a market for wastepaper, including broke, “since at least the early 1900s”. (Klass, Phase I Tr. at 607:14-17; *see also* Farrand, Phase I Tr. at 149:11-13; Cornell, Phase I Tr. at 1009:16-19 (testifying that broke was sold into an “established going market” with “a competitive price structure”)); *see also Whiting*, 2012 WL 2704920, at *10 (“ACPC was operating . . . where there was an established secondary market for paper scraps”).

52. There was a strong and constant demand for broke throughout the Production Period.

52.1 Mr. Strelow testified that “[t]here was always a ready demand for [ACPC’s] broke in the Fox Valley.” (Strelow, Phase I Tr. at 929:12-15, 929:25-930:2.) When asked what ACPC had to do to stimulate a ready demand for broke, Mr. Strelow explained that ACPC did not have to do any marketing because that was “all handled by the broker dealers”. (*Id.* at 929:20-24.)

52.2 In 1969 and 1970, a total of almost 24 million tons of paper stock was bought by paper recycling mills in the United States. (TX 5330 at -821.)

53. Prices in this “commodity market”, as Wally Bergstrom, a long-time purchaser at the Bergstrom mill, described it (*Whiting* Tr. (Bergstrom) at 1302:11 (TX 3)), were determined by supply and demand (Klass, Phase I Tr. at 608:10-12; Hanson, Phase I Tr. at 534:11-13; Geigel 10/13/2011 Dep. Tr. at 27:4-6 (TX 7)).

53.1 Broke prices fluctuated over time. (Phase I PTO at 8, ¶ 86.) Dr. Dolan admitted that these fluctuations were tied to market supply and demand. (Dolan, Phase I Tr. at 830:12-14.) Broke prices were also affected by the cost of virgin pulp, for which broke served as a cost-effective substitute. (Christensen 3/25/2009 Dep. Tr. at 168:20-169:23 (TX 13).) At times, broke and virgin pulp were even “comparably priced”. (Hanson, Phase I Tr. at 538:24-539:7.)

53.2 There were published prices for different grades of broke, including CCP broke. (Phase I PTO at 8, ¶ 85.) Trade journals—such as the *Paper Trade Journal* (e.g., TX 3372) and the *Official Board Markets* (e.g., TX 3374)—published prices of CCP broke and other grades of wastepaper (Geigel 10/13/2011 Dep. Tr. at 26:12-19 (TX 7)). One of the reasons that purchasers at recycling mills read those journals was “because they had market information on different grades of waste paper”. (*Id.*)

54. There was competition among the numerous brokers to sell broke.

54.1 It is undisputed that the Coating Companies sold their broke to brokers. (Phase I PTO at 5-6, ¶¶ 29, 43, 55; *see also* Christensen 3/25/2009 Dep. Tr. at 32:1-3 (TX 13); Strelow, Phase I Tr. at 928:8-10.) As Mr. Strelow explained, ACPC followed “a policy of dealing through broker dealers”, as ACPC “didn’t want to do anything to undercut [the brokers]”. (Strelow, Phase I Tr. at 930:7-10.)

54.2 Like the Coating Companies, brokers were trying to make money by selling broke. (Bergstrom 9/27/2011 Dep. Tr. at 30:1-12 (TX 78).) Based on his extensive dealings with brokers, Mr. Bergstrom believed that brokers viewed wastepaper as a valuable product; as he put it, “that’s how they made their brokerage fee”. Bergstrom, *Whiting* Tr. at 1302:5-22 (TX 3).) Dr. Dolan agreed that brokers considered the broke to be valuable, as “it was the basis for them conducting their business”. (Dolan, Phase I Tr. at 831:7-10.)

54.3 Brokers advertised their companies in the same publications that published broke prices. (Cornell, Phase I Tr. at 1009:1-1010:6; *see, e.g.*, TX 3372 at -203 (broker advertisements in the *Paper Trade Journal*), TX 3524 at -656 (broker advertisements in an article entitled “Waste Paper—A Major Raw Material” in the *Waste Trade Journal*).)

55. Brokers invested time and effort in sorting their supply of wastepaper in order “to maximize their revenue”. (Farrand, Phase I Tr. at 149:25-150:4.)

56. Companies involved in the broke market invested in the business of selling or purchasing broke.

56.1 For example, Mead established a separate business subsidiary, Mead Pulp Sales, Inc., “to assist in the selling of Mead’s broke to [broke] markets”. (Dolan, Phase I Tr. at 831:15-18; *see also* TX 3609 at 26 (Mead Annual Report describing Mead Pulp Sales, Inc.).)

56.2 This has continued to today. GP itself owns “the largest trading company of recycled fiber in the world”. Harmon Associates, a division of GP, reportedly has “[r]epresentation in all major worldwide recycled fiber markets”, with over 350 balers in service”. (TX 12369.) Harmon’s marketing materials promote the company’s “[e]xtensive marketplace knowledge”. (*Id.*; *see also* Dolan, Phase I Tr. at 832:4-19.)

57. Brokers purchased CCP broke and other secondary fiber from the Coating Companies for the purpose of selling a valuable product to paper mills and making a profit, not to dispose of a waste. (Dolan, Phase I Tr. at 830:22-831:10; Bergstrom 9/27/2011 Dep. Tr. at 30:20-25 (TX 78); Charles 10/12/2011 Dep. Tr. at 38:21-25 (TX 8).)

57.1 GP itself has unequivocally acknowledged the important role of brokers in the secondary fiber marketplace. A promotional video for GP Harmon Recycling states:

“Through us, GP Harmon Recycling, thousands of companies meet their recycling needs and have access to worldwide ready markets. Recycling adds value to every business, every day. . . . Our customers depend on GP Harmon for one thing: Delivering a premium product. A product of consistently high quality. . . . We aren’t waste haulers, and we’re not in the trash collection business.”³

57.2 Ronald Hanson, who worked at GP’s Kalamazoo recycling mill, summarized the characteristics of the market for broke and other secondary fiber:

³ GP Harmon Recycling, *GP Harmon Recycling Provides Premium Recycled Products*, <http://www.youtube.com/watch?v=iaHOqux-cmE> (last visited Apr. 18, 2013).

- Robust;
- Highly-evolved;
- Tremendous network;
- Prices driven by supply and demand; and
- Many mills that consumed secondary fiber for many different products.

(Hanson, Phase I Tr. at 534:11-535:15.)

58. It is undisputed that recycling mills that procured CCP broke always had to pay for it, and that they used the broke to make new paper products and considered this raw material valuable. (Phase I PTO at 8, ¶¶ 82, 87, 88.)

59. There was active competition among the recycling mills to purchase broke and other secondary fiber.

59.1 The Coating Companies tried to maximize their revenue on their broke sales. (Christensen 3/25/2009 Dep. Tr. at 167:13-168:6, 206:1-18 (TX 13).)

59.2 Recycling mills sometimes had to bid against each other to obtain wastepaper. (Bergstrom 9/27/2011 Dep. Tr. at 37:10-24 (TX 78); Charles 10/12/2011 Dep. Tr. at 24:13-17 (TX 8); Martin 8/30/2011 Dep. Tr. at 108:3-16 (TX 37).); *see Whiting*, 2012 WL 2704920, at *3 (finding that “mills competed with each other to obtain usable broke at the best prices”).

59.3 Wally Bergstrom testified that there was “vicious competition” for buying broke and other secondary fiber among the Fox River mills. (Bergstrom 9/27/2011 Dep. Tr. at 37:10-21 (TX 78).) Broke was “in short supply . . . all the time”, according to Mr. Bergstrom. (Bergstrom, *Whiting* Tr. at 1303:2-3 (TX 3).) During periods of broke shortages, Mr. Bergstrom called dealers on weekends “and harassed them, harangued them”, offering “whatever it was to get them to do what I needed”. (*Id.* at 1305:17-24.)

59.4 There was also competition for acquiring secondary fiber among the Kalamazoo mills. (Hanson, Phase I Tr. at 537:10-17.)

60. There was no difference in how recycling mills procured CCP broke and other types of secondary fiber. (Bergstrom 9/27/2011 Dep. Tr. at 29:7-11 (TX 78).)

61. When recycling mills bought broke, they were buying a valuable raw material useful for making new paper. Indeed, a steady supply of broke was the “lifeblood” of many recycling mills, including GP’s Kalamazoo mill and Fort Howard mill.

61.1 GP’s Kalamazoo mill considered secondary fiber (including CCP broke) to be a “valuable raw material” that the mill “needed to acquire for [its]

business”. (Hanson, Phase I Tr. at 540:1-3; Martin 8/30/2011 Dep. Tr. at 108:17-22 (TX 37).)

61.2 Mr. Hanson testified that deinking recycling operations “were the lifeblood” of GP’s Kalamazoo mill, and that the mill needed secondary fiber (such as CCP broke) to make those operations “economically feasible”. (Hanson, Phase I Tr. at 532:20-534:7, 535:22-536:1.)

61.3 The *Whiting* court found that recycling mills “viewed broke as a valuable and even indispensable product, given that recycling it was the basis of their business”. *Whiting*, 2012 WL 2704920, at *3.

61.4 GP’s goal in purchasing broke at its Fort Howard mill was also “to supply the raw material that [the] mill needed to operate”. (Geigel 10/13/2011 Dep. Tr. at 30:4-7, 55:18-56:9 (TX 7); *see also* Charles 10/12/2011 Dep. Tr. at 18:25-19:5, 22:10-15 (TX 8); Pagel 10/12/2011 Dep. Tr. at 9:17-10:15, 11:3-21 (TX 9); Schneider 10/13/2011 Dep. Tr. at 14:2-5, 27:23-28:5 (TX 10).) The purchase of broke was thus “an important function at Fort Howard”. (Geigel 10/13/2011 Dep. Tr. at 29:5-8 (TX 7).) Because secondary fiber was needed “to make [Fort Howard’s] business model work” (Charles 10/12/2011 Dep. Tr. at 54:2-13 (TX 8)), the mill carried inventories so it could keep making its paper (*id.* at 25:2-8).

61.5 Dr. James Farrand, one of GP’s experts, described CCP broke as “a desirable waste paper fiber” that was “valuable to the [recycling] mills” and met their “business needs”. (Farrand, Phase I Tr. at 126:25-127:8, 150:11-14, 151:3-12, 154:25-155:8.) Dr. Dolan agreed that broke was useful to recycling mills “because it was something they could input into their manufacturing process and produce the output they were looking for in a cost-effective manner”. (Dolan, Phase I Tr. at 833:1-15.)

61.6 As D.W. Bergstrom, who was vice president of the Bergstrom Paper Company (which owned a large recycling mill on the Fox River), stated during a 1960 speech at the Waste Paper Symposium:

“[W]aste paper—which we here recognize as a commodity of tremendous value and worth—is, to the public, junk, trash, rubbish, something to be burned out back. Waste paper is NOT junk! In the last five years 44,172,000 tons of this commodity has been consumed. . . . So, I repeat: waste paper is NOT junk; it is an important commodity to our economy.” (TX 1401 at -711; *see* Bergstrom, *Whiting* Tr., at 1295:9-14 (TX 3).)

62. Recycling mills invested time and resources in procuring and using broke and other secondary fiber.

62.1 The Bergstrom mill developed guidelines related to procuring wastepaper, which were used to train the mill's employees. (Bergstrom, *Whiting* Tr. at 1296:1-16 (TX 3).) The mill also extensively documented and tracked its wastepaper purchases. (*Id.* at 1296:20-1297:11.)

62.2 GP's Kalamazoo mill also invested resources in wastepaper, including weighing, inspecting, grading, labeling and storing the bales. (Hanson, Phase I Tr. at 539:11-540:3.) Similar procedures were used at Fort Howard. (*See* Geigel 10/13/2011 Dep. Tr. at 15:16-24, 21:12-15 (TX 7).)

63. Using broke as a raw material was financially beneficial to paper mills because it was usually less expensive to make new paper with broke than with virgin fiber. (*See* Bergstrom, *Whiting* Tr. at 1290:25-1291:3 (TX 3)0; Geigel 10/13/2011 Dep. Tr. at 27:16-28:18 (TX 7); Farrand, Phase I Tr. at 148:10-20.)

63.1 A 1961 article entitled "The Economics of Deinked Stock Usage versus Virgin Pulp Usage" stated, "[i]t is an obvious truism to say that you use deink [stock] because it is profitable; it saves you money". (TX 3533 at -358.)

63.2 Similarly, a 1960 brochure for GP's Kalamazoo mill stated that "[w]hile Kalamazoo [Paper Company] could make paper completely from virgin pulp it would not be economically feasible to do it". (TX 1055 at -865.)

64. Not only was de-inked pulp from wastepaper more cost-efficient, it was also a more desirable furnish for some products.

64.1 The 1960 brochure for GP's Kalamazoo mill stated that "customers want the qualities of paper made with de-inked pulp for many uses". (TX 1055 at -865; *see also* Hanson, Phase I Tr. at 536:7-10; Cornell, Phase I Tr. at 1007:24-1008:17.) According to GP itself, "[t]here are great fiber values in de-inked paper", and "[t]he secret of the value and greater utility of Kalamazoo paper is in its combination of revitalized fibers and virgin fibers". (TX 1055 at -864.)

64.2 Mr. Hanson agreed that "it was only by using the revitalized fiber that you could make paper that was tractable and thoroughly seasoned and dimensionally stable". (Hanson, Phase I Tr. at 536:2-10.)

65. Some grades of CCP broke could even be classified as virgin fiber (Farrand, Phase I Tr. at 151:24-152:1), which is undisputedly a useful and valuable product.

65.1 Dr. Farrand testified that "[a] pulp substitute is a type of waste paper that can be used by a paper mill without going through deinking or any other type of special processing". (Farrand, Phase I Tr. at 152:2-5.) That is, "a pulp substitute can be processed by a paper mill in the same way as virgin pulp". (*Id.* at 152:6-8.)

65.2 According to Dr. Farrand, “white” grades of CCP broke “could be used by a paper mill in the same way as virgin pulp”. (*Id.* at 152:9-12.)

66. Recycling mills purchased broke to use it as a raw material, not to dispose of it as a hazardous substance.

66.1 GP’s experts admitted that recycling mills acquired broke to use it as a raw material in making new paper. (Klass, Phase I Tr. at 607:18-608:6; Farrand, Phase I Tr. at 146:19-147:2.)

66.2 One of the former employees at GP’s Fox River paper mill, Fort Howard, similarly testified that GP bought broke “for the purpose of making paper products”, and not “for the purpose of disposing of waste” into the environment. (Geigel 10/13/2011 Dep. Tr. at 29:16-30:2 (TX 7).)

66.3 It is undisputed that “[r]ecycling mills that purchased broke were not waste disposal companies” (Phase I PTO at 9, ¶ 89), and—as numerous employees testified—did not consider themselves to be in the waste disposal business (*e.g.*, Charles 10/12/2011 Dep. Tr. at 49:8-13 (TX 8); Schneider 10/13/2011 Dep. Tr. at 14:19-15:3 (TX 10); Bergstrom 9/27/2011 Dep. Tr. at 48:7-16 (TX 78).)

67. Like the CCP broke produced by the Coating Companies, the CCP trim produced by Independent Converters and Systemedia was a useful product.

68. CCP trim is produced during paper converting operations. (Phase I PTO at 4, ¶ 12.)

69. The trim produced by Independent Converters and Systemedia and the broke produced by Coating Companies was the same desirable raw material used by recycling mills for the same purpose—to make new paper.

69.1 GP’s paper industry expert, Dr. James Farrand, agreed that CCP trim sold by converting facilities possessed the same desirable qualities as CCP broke from the Coating Companies. (Farrand, Phase I Tr. at 151:3-23.)

69.2 Dr. Farrand admitted that CCP broke, “particularly [carbonless broke] that came from coating and [trim generated by] converting operations, [was] relatively clean, had good fiber content, low filler level and the ability to be broken up easily in a pulper”. (Farrand, Phase I Tr. at 151:3-12.)

69.3 Dr. Farrand further testified that these “good qualities are what made carbonless [broke and trim] from *coating and converting facilities* desirable to paper mills”. (Farrand, Phase I Tr. at 151:20-23 (emphasis added).)

69.4 GP’s business expert, Dr. Dolan, similarly admitted that for the purposes of paper making he could not identify “*any significant differences* in the record between using [trim] that may have come from a converting facility, like

Washington Court House or Viroqua, versus using broke that may have come from Mead or Appleton or Combined Locks”. (Dolan, Phase I Tr. at 833:18-24 (emphasis added).)

69.5 NCR’s economics expert, Professor Brad Cornell, testified that broke from the Coating Companies and trim from the Independent Converters and Systemedia were the same desirable raw material, and that it was sold to paper companies for the same reason—to produce new paper. (Cornell, Phase I Tr. at 998:1-1002:5.)

69.6 Professor Cornell testified that CCP trim from the Independent Converters and Systemedia and broke from the Coating Companies both had economic value and were an important part of a profitable ongoing business. (Cornell, Phase I Tr. at 998:1-18.)

69.7 Just like the Coating Companies, Independent Converters and Systemedia sold their trim to brokers in order to improve their bottom line. (Cornell, Phase I Tr. at 998:1-9; 1001:14-1002:5.)

70. Like the Coating Companies, Independent Converters and Systemedia treated CCP trim like a valuable product.

70.1 GP’s expert Dr. Dolan admitted that he did not find “any material differences” in the way that CCP broke was collected, sorted and prepared for sale by the Coating Companies versus CCP trim by the Independent Converters and Systemedia. (Dolan, Phase I Tr. at 823:9-21.)

70.2 Like GP’s experts, Dr. Cornell testified that broke produced by converting operations, such as the NCR Converters, was collected, sorted, stored and prepared for the market, just like broke from the Coating Companies was. (Cornell, Phase I Tr. at 998:1-9; 1000:8-1001:13.)

70.3 Like the Coating Companies, Independent Converters and Systemedia always sold CCP trim and never discarded it. (Phase I PTO at 7, ¶ 65; Rupard 2/3/2012 Dep. Tr. at 85:18-86:5 (TX 47).)

70.4 Like the Coating Companies, Independent Converters and Systemedia had procedures to collect, bale, weigh and store their trim. (Hanson, Phase I Tr. at 539:11-14; Self 3/16/2012 Dep. Tr. at 28:19-30:4 (TX 51); Gilmore 3/16/2012 Dep. Tr. at 18:12-19:10 (TX 50).)

70.5 Like the Coating Companies, Independent Converters and Systemedia invested capital and labor in order to prepare their CCP trim for sale. (Phase I PTO at 7, ¶ 66.)

70.6 Like the Coating Companies, Independent Converters and Systemedia sold their CCP trim to brokers in the same well-established market as the Coating Companies. (Hanson, Phase I Tr. at 534:23-535:4.)

70.7 Like the Coating Companies, Independent Converters and Systemedia accounted for the proceeds from the sale of CCP on their balance sheets. (Rupard 2/3/2012 Dep. Tr. at 85:18-86:5 (TX 47); Clason 2/17/2012 Dep. Tr. at 47:7-10 (TX 48).)

70.8 Like the Coating Companies, Independent Converters and Systemedia treated CCP trim as an asset and not a liability on their balance sheets. (Dolan, Phase I Tr. at 822:5-9.)

71. Like the Coating Companies, Independent Converters and Systemedia took care in handling their trim because they knew it had value. (Hanson, Phase I Tr. at 537:18-25.)

Addendum E**KPC Mill Bypass History**

Year	Date(s)	Material	Description	Reference
1967	Sept. 8	Wastewater	Wastewater bypassed clarifier for Mill 2 due to faulty pump.	TX 11110 at -714; TX 4309.12 at -339
1967	Sept. 26	Wastewater	Bypassing into the Kalamazoo River	TX 11110 at -714; TX 4309.12 at -339
1967	Oct. 1 – 8, 11, 14 – 15, 23	Wastewater	“[D]ates denote incidents of bypasses of Kalamazoo Paper’s #2 clarifier”.	TX 11110 at -714; TX 4309.12 at -340
1967	Nov. 3 – 5, 13 – 14	Wastewater	“[D]ates denote incidents of bypasses of Kalamazoo Paper’s #2 clarifier”.	TX 11110 at -714; TX 4309.12 at -340
1967	Nov. 16	Wastewater	Wastewater bypassed clarifier and municipal interceptor due to faulty pump. No water was being delivered from the wet well to the clarifier.	TX 11110 at -714; TX 4309.5 at -861; TX 4309.12 at -339
1967	Dec. 12 – 18, 20, 23, 26, 27	Wastewater	“[D]ates denote incidents of bypasses of Kalamazoo Paper’s #2 clarifier”.	TX 11110 at -714; TX 4309.12 at -340
1967	Dec. 20	Wastewater	20 gpm of milky-white water overflowing the weir on the clarifier and discharged to Kalamazoo River	TX 11110 at -714; TX 4309.9 at -839
1968	Jan. 1 – 3, 7, 17, 21	Wastewater	“[D]ates denote incidents of bypasses of Kalamazoo Paper’s #2 clarifier”.	TX 11110 at -714; TX 4309.12 at -340
1968	Feb. 10 – 11, 15 – 17, 19 – 20, 23 – 24, 26	Wastewater	“[D]ates denote incidents of bypasses of Kalamazoo Paper’s #2 clarifier”.	TX 11110 at -714-15; TX 4309.12 at -340
1968	Mar. 27, 29	Wastewater	“[D]ates denote incidents of bypasses of Kalamazoo Paper’s #2 clarifier”.	TX 11110 at -714-15; TX 4309.12 at -340
1968	Mar. 21	Wastewater	Overflow from clarifier	TX 11110 at -715; TX 4309.11 at -720
1968	Mar. 27	Wastewater	Mill 2 effluent bypass to river.	TX 11110 at -715
1968	Mar. 29	Wastewater	Mill 2 effluent bypass to river.	TX 11110 at -715
1968	Apr. 6, 14, 23	Wastewater	“[D]ates denote incidents of bypasses of Kalamazoo Paper’s #2 clarifier”.	TX 11110 at -715; TX 4309.12 at -340
1968	Apr. 19	Wastewater	Clarifiers were down.	TX 4309.12 at -340
1968	Apr. 25	Wastewater	Unknown	TX 4309.12 at -340
1968	May 21	Wastewater	Small amount of waste “seeping from the clarifier directly to the river”.	TX 4309.13 at -886

Year	Date(s)	Material	Description	Reference
1968	June 3	Wastewater	Bypassing of clarifier (100 gpm)	TX 4309.14 at -886; TX 11110 at -715
1968	Aug. 7-8	Wastewater	Documented bypass to River. Sludge collection mechanism became inoperable on the big clarifier for Mills 1 & 3 and the clarifier was taken out of service for repairs.	TX 11110 at -715; TX 4309.15 at -868; TX 4309.20 at -477; TX 11154 at -250; TX 11110 at -715
1968	Nov. 11	Wastewater	Mill 2 bypass	TX 11110 at -715
1968	Nov. 13	Wastewater	Mill 2 bypass	TX 11110 at -715
1968	Nov. 18	Wastewater	Mills 1 & 3 bypass	TX 11110 at -715
1968	Nov. 28	Wastewater	Mill 2 bypass	TX 11110 at -715
1968	Dec. 15	Wastewater	Series of waste bypasses resulting from installation of new paper machine. Installing the new paper machine involved wasting stock, and the clarifier pump broke due to increased load.	TX 11214 at -030
1968	Dec. 22	Wastewater	Weekend bypassing	TX 11214 at -030
1969	Apr. 6-10	Wastewater	Primary clarifier bypassed because sludge had clogged the sludge collection mechanism. KPC attempted to move sludge collection mechanism with a tractor and broke the mechanism casing, necessitating further repairs.	TX 4309.18 at --237 (Ex. 4309.18); TX 4309.21 at -040; TX 6039 at -032-33; TX 11110 at -715
1969	May 23	Wastewater	Small clarifier out of operation because sludge built up and broke the belts on the sludge collection mechanism.	TX 4309.20 at -476; TX 4309.21 at -040
1969	July	Raw Paper Wastewater	Overflowing of interceptor at Mill 2 clarifier due to recent heavy rains.	TX 2322 at -257
1969	Aug. 1 – 5	Wastepaper	Clarifier out of operation because sludge buildup caused shear pin and drive gear for sludge collector to break.	TX 11110 at -716; TX 4309.22 at -872; TX 11931 at -714
1969	Sept. 16	Raw Paper Wastewater	#1 clarifier bypassed for a few hours due to sludge buildup	TX 11110 at -716

Year	Date(s)	Material	Description	Reference
1970	July 31	Raw Paper Wastewater	Clarifier bypassed for 12 hours (mechanism stopped). “[I]t was necessary for us to bypass our Mill effluent going to the 110’ clarifier directly into the river because the clarifier had become plugged.”	TX 11110 at -716; TX 11217 at -054-55; TX 11110 at -716; TX 11933 at -598
1970	Sept. 29	Wastewater	Primary clarifier bypassed because clarifier plugged	TX 11110 at -716; TX 11110 at -716
1971	Oct. 11	Unknown	“[C]larifier bypass (24 hours) due to plugged clarifier”.	TX 11110 at -716
1974	June 15	Wastewater	Bypass due to operator error	TX 11219 at -121-22; TX 11110 at -716
1975	May 19	Wastewater	Clarifier bypassed for four hours	TX 11110 at -716; TX 11110 at -716
1976	June 8	Wastewater	Power failure with three intercept pumps that lasted ten minutes	TX 11935 at -610; TX 11110 at -716
1977	Sept. 17	Unknown	Control failure with one of the three intercept section pumps. Other two pumps were insufficient to handle the effluent flow because there was a “very heavy rain storm” and the filter plant operator backwashed a filter at that time.	TX 11145 at -045; TX 11110 at -716
1979	Aug. 1	Unknown	Five minute discharge due to total mill failure	TX 11110 at -716
1979	Aug. 4	Unknown	Overflow of mill’s effluent occurred at the intercept station	TX 11932 at -015
1979	Aug. 9	Unknown	5,000 gallon discharge from lift station from lift pump seal	TX 11222 at -202; TX 11110 at -716
1979	Sept. 19	Unknown	“5,000 gallon [sic] caused by damaged lift pump seal”.	TX 11110 at -716
1979	Nov. 27	Wastewater	Power failure “resulted in the bypass of approximately 150,000 gallons of untreated process wastewater to the Kalamazoo River from the main wet well.” Wet well “is located on the bank of the river”.	TX 11971 at -797
1980	Feb. 25 – 26	Clay	“Discharge of 28,000 pounds of clay to city sewer”.	TX 11395 at -444; TX 11110 at -716

Year	Date(s)	Material	Description	Reference
1980	Oct. 7	Wastewater	Overflow from main lift station	TX 11110 at -717; TX 11223 at -230
1981	June 24 – 25	Water containing clay	“70,000 gallon discharge mistakenly sent to storm sewer.”	TX 11232 at -328; TX 11110 at -717
1981	Dec. 9	100 gallons of process water	Discharge of 100 gallons of process water into the Kalamazoo River from main lift station because of faulty pump switch.	TX 11232 at -239; TX 11110 at -717

Addendum F**Bryant Mill Bypass History**

Year	Date(s)	Material	Description	Reference
1955	Aug.	Wastewater	Bypass sewer from the pump house was discharging untreated waste to Portage Creek.	TX 4881 at -482
1956	Jan. 26	Unknown	Bypassing at St. Regis noted.	TX 4877 at -1058
1956	Jan. 26	Wastewater	“As an average approximately 69 per cent of the two hour settleable solids in the waste receiving treatment were being retained. Frequent observations, however, have disclosed that all of the waste is not receiving treatment 100 per cent of the time.”	TX 7477 at -555
1956	Apr. 10	Wastewater	Final pumping station at clarifier was not handling its capacity so excess overflowed to Portage Creek.	TX 4877 at -1058
1956	Nov. 14	Wastewater	Bypassing of settling tanks was observed.	TX 4877 at -1058
1957	Aug.	Deinked waste	Mill A bypass, 1.305 MGD for 6 days	TX 11424 at -193; TX 4877 at -1058
1958	Jan. 20	Deinked waste	Mill A effluent bypassing settling tank	TX 4877 at -1058; TX 11424 at -193
1958	May 1	Wastewater	High residual suspended solids in clarifier effluent due to high loading (50% more volume)	TX 4877 at -1059; TX 1049 at -531
1958	July 22	Wastewater	Bypass of Bryant clarifier.	TX 4877 at -1064
1958	Nov.	Wastewater	Bypassing observed	TX 4877 at -1059; TX 4882 at -565
1958	Dec.	Wastewater	Bypassing observed	TX 4877 at -1059
1960	Nov.	Wastewater	Tanks were down; bypassing observed	TX 4877 at -1060; TX 11947 at -797
1961	Apr. 6	Deinked waste	Bypass of Bryant pump station wet well caused by bar screen being plugged with rags and debris.	TX 4877 at -1060; TX 11449 at -890
1961	June 6	Deinking wastewater	Hand-cleaned bar grate plugged at main pump station leading to Bryant clarifier	TX 4877 at -701

Year	Date(s)	Material	Description	Reference
1961	June 27 – 28	Whitewater, deinked waste	White water bypass due to pump trouble (0.288 mgd), deinked waste bypass (0.367 mgd) due to plugged bar grate	TX 4877 at -1060; TX 11198 at -396-97; TX 4959 at -558
1961	Nov. 15	Wastewater	Waste treatment plants were not in operation	TX 4877 at -1060; TX 2010 at -999
1962	Oct.	Wastewater	Bypass due to shut down of bar grates and wet well not operating at capacity	TX 4877 at -1060; TX 4890 at -228
1962	Nov. 6	Wastewater	Bypassing occurring	TX 4877 at -1060-61
1964	Feb. 13 and 19	Wastewater	“Treatment facilities for removal of settleable solids from the wastes at the Bryant Division was found by staff inspection February 13, 1964 and again on February 19, to be out of operation.”	TX 11247 at -863
1965	May 18	Wastewater	Bypassing at Alcott Street	TX 4877 at -1061; TX 4309.4 at -141
1965	May 21-22	Wastewater	Partial bypassing due to mechanical failure of pumps	TX 4877 at -1061
1965	June 9	Wastewater	The waters from Mill C and D, coming into a pump station near Mill D, are not being pumped to Mill A pumping well; numerous leaks between pumphouse and railroad bridge	TX 4877 at -1061-62; TX 11262 at -302
1965	June 11	Wastewater	Bypass due to sludge buildup causing clarifier malfunction	TX 4877 at -1062; TX 11199 at -689. <u>See also</u> TX 11366 at -564.
1966	July 18 – 20	Wastewater	Heat recovery oliver down for repairs and water bypassing pumphouse	TX 11018 at -134
1966	Aug. 2	Wastewater	Three hour bypass caused by blown gasket	TX 4877 at -1062; TX 5288 at -567
1967	Mar. 27 – Apr. 21	Wastewater	Bypass to creek observed	TX 4877 at -1062; TX 4887 at -108
1967	Apr. 3	Wastewater	Bypassing directly into creek instead of going to the clarifier.	TX 11017 at -149
1967	Apr. 10 – 14	Wastewater	Bypassing in creek with all three pumps running	TX 11017 at -150
1967	Nov. 29 – Dec. 1	Wastewater	Bypassing to creek below dam	TX 4877 at -1062; TX 11949 at -832
1967	Dec. 4 – 8	Wastewater	Bypassing below dam	TX 4877 at -1062; TX 11950 at -836
1967	Dec. 12	Wastewater	Bypass observed at Alcott Street caused by bad risers and valves at pumps	TX 4877 at -1062; TX 4309.6 at -983

Year	Date(s)	Material	Description	Reference
1967	Dec. 11 – 13	Wastewater	Bypassing below dam	TX 4877 at -1062; TX 11951 at -840
1967	Dec. 20	Wastewater	Bypass caused by burned out waste pump	TX 4877 at -1063; TX 4309.8 at -144; TX 4309.9 at -839
1967	Dec. 18 – 22	Wastewater	Overflowing into creek	TX 4877 at -1063; TX 11952 at -841
1968	Mar. 4	Chlorinated water	Bypass from deinking mill observed	TX 4877 at -1063; TX 11261 at 113
1968	Mar. 5	Underflow to clarifier	Left bank of Portage Creek 100 yards south of Alcott Street.	TX 5294 at -685
1968	Apr. 4	Whitewater	Streams from Mill C, D and power plant to Portage Creek	TX 4877 at -1063; TX 11427 at -269
1968	Apr. 24	Effluent from paper waste	Bypasses observed	TX 4877 at -1063
1968	June 13	Wastewater	Periodic bypassing of Bryant clarifier when mill is “unable to pump the entire effluent through the 20" line to the clarifier”.	TX 4877 at -1063-64; TX 11188 at -001
1968	June 17	Wastewater	“This is in reference to your recent telephone conversation . . . regarding by-passing of the white water at the Bryant Mill.”	TX 11017 at -241
1968	July 8 – 20	Whitewater only	Deinked waste to clarifier, whitewater to creek at pump station for two week trial	TX 11148 at -719. <u>See also</u> TX 4877 at -1064; TX 11958 at -932; TX 11368 at -619 (proposing bypassing).
1968	July 22	Unknown	Bryant bypass observed	TX 4877 at -1064
1968	July – Aug.	Wastewater	Bypass into Portage observed, necessary for Allied to clean its waste pipes and permitted as long as it was kept to a minimum	TX 4877 at -1064
1968	Nov. 26	Wastewater	“While conducting a survey of the dumping operation . . . it was noted that compactor covering was not being practiced on a daily routine basis and the use of the river flood plains was being utilized.”	TX 11017 at -260
1970	Aug.	Wastewater	Fish kill attributed to discharge	TX 11017 at -340
1970	Sept.	Wastewater	Fish kill attributed to discharge	TX 11017 at -352
1971	Feb. 22	Wastewater	Clarifier overflow all the way around	TX 5322 at -374
1971	Mar. 8 – 12	Wastewater	Clarifier effluent line to city plugged up	TX 4877 at -1064; TX 11957 at -910

Year	Date(s)	Material	Description	Reference
1971	May 17	Wastewater	Overflows at Mills A and D into Portage Creek responsible for purported fish kills	TX 4877 at -1064
1971	June 14 – 18	Wastewater	Clarifier ran over every day this week	TX 4877 at -1064; TX 11956 at -- 909
1972	July 2	Wastewater	Pollution report documenting fish kill	TX 11984 at -398
1972	Nov. 5	Whitewater	“The only bypass of white water to Portage Creek was as a result of the very sudden shutdown of the paper machines and was of very short duration.”	TX 2021 at -154; TX 2021 at -154
1974	June 3	Wastewater	Overflow of wastewater into Portage Creek caused by power plant rupture; fixed within 2 hours	TX 4877 at -1065; TX 11448 at - 256
1975	Dec. 9	Wastewater	A discharge pipe broke at Mill D resulting in an overflow of untreated waste water into Portage Creek for 45 minutes	TX 4877 at -1065; TX 11431 at - 669
1978	Mar.	Unknown	Unpermitted discharge of filter backwash from the Bryant Mill of which the Bryant Mill was repeatedly notified as far back as 1973. Among the reasons why Bryant Mill's industrial rating was downgraded from an A to an I.	TX 11231 at -306
1978	Mar. 14	Unknown	Power outage occurred and effluent from the Bryant clarifier that should have been treated at the Monarch clarifier was bypassed. For a “substantial part” of the approximately 7 hours when the bypass occurred, the paper machines were not operating.	TX 11953 at -867; TX 4877 at - 1065
1978	Apr. 19	Unknown	“[A] leak was noted in the flange in our 20' line near the ‘Grey Tank,’ the pipe that carries the waste flow to the Bryant clarifier.”	TX 4950 at -201; TX 4877 at - 1065
1979	June 22	Whitewater	Small hole in gravity line from Mill C discharged less than 300 gallons white water into Portage Creek near the Mill D pumping station	TX 11954 at -868; TX 4877 at - 1065

Year	Date(s)	Material	Description	Reference
1980	Mar. 1	Unknown	Computer control of the flow from the gray tank failed, the pumps to the clarifier stropped and the gray tank overflowed.	TX 11205 at -299-301; TX 4877 at -1065-66
1981	July 20	Unknown	Clarifier down for 3-4 hours, and mill discharging. Samples taken at Alcott Street and Reed Street indicate TSS levels of 18.3 and 21.1 mg/L, respectively.	TX 11985 at -733 (handwritten notes); TX 4877 at -1066
1981	July 30	Wastewater	1 out of 3 Mill D pumping station pumps had to be taken off-line to conduct repairs, and one pump being used while repairs occurred failed.	TX 11360 at -895; TX 4877 at -1066

Addendum G**King Mill Bypass History**

Year	Date(s)	Material	Description	Reference
1956	Sept.	Wastewater	Waste seen bypassing King clarifier.	TX 4877 at -1058
1956	Oct.	Wastewater	Waste seen bypassing King clarifier.	TX 4877 at -1058
1956	Nov.	Wastewater	Waste seen bypassing King clarifier.	TX 4877 at -1058
1957	Jan. 23, 1957 – Jan. 30, 1958	Wastewater	The King settling tank was down 13-20% of the operating days due to mechanical and operational trouble.	TX 11425 at -195-96; TX 4877 at -1058; TX 11397 at -180
1958	Jan. 27	Wastewater	During the week of 1/27/1958, the settling tank operated properly only 2 of 6 days due to sludge build up.	TX 4888 at -217
1959	Mar. 16	Wastewater	Bar grates plugged bypassing settling tank	TX 4877 at -1059; TX 4883 at -614
1960	Aug. 2 – 11	Wastewater	Tank down for repairs	TX 4880 at -371
1961	June 27 – 28	Wastewater	Bypass at the back water gate on the bypass sewer line.	TX 4877 at -1060
1961	Nov. 15	Wastewater	All waste being bypassed.	TX 11184 at -937
1962	Oct.	Wastewater	Waste bypassing through the butterfly swing gate to the river because the wet well was not operating at adequate capacity.	TX 4877 at -1060
1962	Nov. 6	Wastewater	Bypassing was occurring at King.	TX 4877 at -1060
1963	May	Wastewater	Occasional bypass occurs at the King Division when the flow exceeds the pumping capacity	TX 4877 at -1060; TX 11948 at -815

Year	Date(s)	Material	Description	Reference
1964	Apr. 29	Wastewater	During a WRC site visit sizable flows were bypassing treatment through a leak in the flap gate. At times, it was noted that clarifier effluent flowed back through the gate from the reverse side combining with the raw waste in the wet well. At least once, the gate was stuck in the open position. An undetermined amount of King Mill wastewater bypassed treatment due to the improperly operating gate.	TX 4877 at -701; TX 4877 at -1061
1970	June 1 – July 10	Wastewater	King down for repairs and bypassing clarifier due to gear trouble; no sample taken	TX 4877 at -1064; <u>See also</u> TX 4309.24 at -163 (letter dated July 2, 1970, urging King to fix clarifier); TX 4309.25 at -041
1978	Aug. 16 – 18	Unknown	Accidental discharge of unionized ammonia. Discharges high in fecal chloriform (that neutralized chlorine levels in river samples). Untreated process waste discharge. Untreated wastewater discharge upstream of the railroad bridge containing very high ammonia nitrogen concentrations.	TX 11234 at -137, -151, -164, -166

Addendum H**Plainwell Mill Bypass History**

Year	Date(s)	Material	Description	Reference
1959	Aug. 4 – 5	Ink wash sump water	Overflow of water from ink wash sump discharged into the river; load to the ink wash sump reduced by putting non-contact sealing water from No. 4 vacuum pumps into the river.	TX 9298 at -013
1966	Jan. 18	Contaminated water	Leak in valve to bypass the primary clarifier just before the sump pumps. “Flow of contaminated water to the river when the [river] level is down”.	TX 11182 at -168
1966	Apr. 13	Broke	Discharged 5,000 lbs broke to sewer	TX 11135 at -566
1968	May 20 – 22	Untreated raw primary waste	Leakage due to improperly fitting gate on No. 4 sewer resulted into discharge into the river	TX 9298 at -013
1968	May 20 – 26	Cloudy water	Cloudy water leaked into No. 3, which typically contained clear water from the boiler house.	TX 9298 at -013
1968	May 11 – 14	Untreated wastewater	Sludge pump on primary clarifier settling tank failed.	TX 4309.19 at -867
1968	Aug. 26	Wastewater	“[T]he waste by-pass gate did not seal properly, resulting in the loss of some primary effluent.”	TX 11981 at -023
1969	May 27 – June 4	Wastewater treated by primary clarifier	Mechanical breakdown in secondary clarifier.	TX 9298 at -013
1969	July 11	Oil, flyash and sewage	Oil, flyash and sewage	TX 4309.23 at -600
1969	Aug.	Detergent (cleaning waste)	Detergent bypassed from boiler room.	TX 9298 at -013; TX 11979 at -948
1969	Sept.	Untreated wastewater	Break in line between mill sump pit and primary clarifier due to deterioration in caulking on sewer pipeline.	TX 9298 at -013; TX 11980 at -949

Year	Date(s)	Material	Description	Reference
1969	Oct. 15	Wastewater	“Weyerhaeuser Paper Corporation -- Kalamazoo River. Except for small losses which occur infrequently, this company maintains an excellent record. Status - satisfactory.”	TX 11228 at -850
1970	June	Oil	Automatic oiling system broke down	TX 9298 at -013
1972	Sept.	White water	“Too many spills causing cooling water sewers to be white water sewers.”	TX 11402 at -409
1973	Apr.	Oil, boilout, white water	Spilled into cooling water while state was sampling.	TX 11403 at -440
1973	July 18	Wastewater	Clarifier bypassed to make repairs to sludge pumps.	TX 7456 at -070
1973	March 5	Wastewater; sludge	Primary clarifier plugged during the night and large amounts of stock were “sewered” until after the clarifier was down. Problem could have been averted by use of a sludge pump. Possibility of sludge overflowing to river due to heavy rainfall.	TX 7704 at -669
1975	July 2	Wastewater	“Primary clarifier had to be bypassed this morning.”	TX 11413 at -715
1975	Aug. 6	Wastewater	Bypass of primary clarifier for “a while” that morning.	TX 11414 at -748
1976	June 24	Wastewater	Primary clarifier bypassed to check new by-pass line.	TX 11418 at -017
1976	July 6	Wastewater	Reference to “Primary Clarifier by-passing period”.	TX 11419 at -032
1976	Aug. 16	Wastewater	Bypassing of the secondary clarifier.	TX 11421 at -448
1976	Aug. 21	Wastewater	Primary clarifier bypassed to the aeration basin from 8/21/1976-8/27/1976.	TX 11404 at -318. <u>See also</u> TX 11415 at -948 (discussing bypass of primary clarifier one day during this period).
1976	Sept. 3	Wastewater	Started bypassing secondary clarifier at 930am	TX 11133 at-363
1976	Sept. 10	Wastewater	Busted gear in secondary clarifier	TX 11134

Year	Date(s)	Material	Description	Reference
1976	Oct.	Wastewater	Secondary clarifier was bypassed and a new inlet trough was constructed.	TX 11207 at -663; TX 11409 at -303
1977	Jan. 31	Unknown	Bypass of Primary Clarifier so that pump could be replaced. Permission to bypass obtained.	TX 11178 at -973
1978	July 10 – 11	Oily wastes	Oily wastes likely due to oily film on floor from motors and pumps in some areas of the mill, although mill noted that residue would be unlikely to enter river.	TX 11208 at -672; TX 11209 at -676; TX 9298 at -013
1979	Jan. 17 – 20	Unknown	Primary clarifier bypassed and mill effluent pumped into aeration basin section of secondary wastewater treatment plant. Mill bypassed in order to repair gear that broke due to an overload of stock lost from the mill.	TX 11943 at -676-77
1979	Feb. 15	Unknown	Bypass of primary clarifier due to broken gear. Permit levels not exceeded.	TX 11210 at -679; TX 9298 at -013
1979	Aug. 10 – 11	Process wastewater	Leakage at Outfall 004 (backup diesel generator).	TX 11210 at -679; TX 9298 at -013
1979	Sept. 25	Styrene	Styrene detected in discharge to river.	TX 11210 at -679; TX 9298 at -013
1982	May 18	Wastewater	Outfall had a milky appearance and changed colors several times during the survey.	TX 7474 at -757

Addendum I**Sutherland Mill Bypass History**

Year	Date(s)	Material	Description	Reference
1954	Jan. 27	Unknown	Memo notes that “losses” are no greater and possibly less than June 1953 levels.	TX 11437 at -538
1968	Jan. 24	Wastewater	Brown bypassing to river through sewer at miles 4 and 7 on river.	TX 11261 at -112
1968	Nov. 27	Wastewater	Employee reported “shady practices” of the Sutherland mill to the MWRC, namely that Sutherland dumped waste into the river during night hours and on the weekends. Following up on this complaint, the MWRC inspected the plant and observed 100 gpm of wastes being bypassed into the river. Report notes, “The bypassed volume represented a small portion of the total plant flow and could be controlled by an adjustable gate”.	TX 7624 at -308
1969	Oct. 15	Unknown	“Brown Paper Company – Downtown plant, after pointing out bypass situation last fall, all wastes have gone to city.”	TX 11228 at -848
1968	Dec. 16	Wastewater	Handwritten notes: “Trouble with Brown #4 and #7 clarifier. Have to by-pass to repair . . . clarifier 13’ x 100”.	TX 7744 at -799
1974	Oct. 1	Wastewater	“[T]he Clarifier was bypassed and [Secondary Fiber Mill effluent] was discharged directly to the city.”	TX 7495 at -681
1975	Mar. 28	Sludge	“[T]he sludge withdrawal line on their clarifier, plugged and the unit was by-passed.”	TX 7731 at -444
1975	Apr. 10	Wastewater	“Started bypassing clarifier again at 2:00pm. Hopes to have back on line morning 4/11/75.”	TX 7731 at -444

Year	Date(s)	Material	Description	Reference
1975	Apr. 16	Wastewater	Handwritten notes: "Brown Co. called 10 pm 4/16/1975. By-passing clarifier".	TX 11961 at -467; TX 7733 at - 800
1976	July 2	Wastewater	Handwritten notes: "Brown Co: By-passing clarifier at noon".	TX 7744 at -798
1976	Dec. 8	Wastewater	Handwritten notes: "Brown Co. 12/8/1976. 11 pm. Bypassing".	TX 7744 at -739
1976	Dec. 28	Wastewater	Handwritten notes: "Brown Co. by-passing 12/28/1976. 3:25 pm".	TX 7744 at -802
1977	Unknown	Unknown	Untreated process water.	TX 11113 at -589.
1980	June 13	Wastewater	Plant was shutdown on this date	TX 7511 at -337
1980	June 20	Wastewater	Plant was shutdown on this date	TX 7511 at -337

Addendum J**MacSimBar Mill Bypass History**

Year	Date(s)	Material	Description	Reference
1951	–	Wastewater	Notice that the Mill is failing to control its share of the pollution of the Kalamazoo River.	TX 7573 at -370
1954	July 13 – 14	Wastewater	Waste flow exceeded the design flow for waste treatment plant	TX 11436 at -085
1964	July 20 – 21	Unknown	Leakage of raw waste to the river from the clarifier influent line was observed. 30 gpm (=0.043 mgd).	TX 4957 at -994

Addendum K**Monarch Mill Bypass History**

Year	Date(s)	Material	Description	Reference
1953	Nov. 3-4	Wastewater	Error in mill changes over preceding week led to discharge	TX 11918 at -1069
1955	July 20, 25, Aug. 24	Wastewater	Bypass sewer from pump house discharge to Portage Creek	TX 4877 at -1058
1955	July 28, 29, 30, 31	Bleach waste, white water overflows and other waste	5.472 MGD (average)	TX 4877 at -1074
1955	Aug. 1, 2, 3	Bleach waste, white water overflows and other waste	5.879 MGD (average)	TX 4877 at -1074
1956	Jan. 10 – 16	White water overflows and other waste	3.682 MGD (average)	TX 4877 at -1074
1956	Nov. 14	Wastewater	Bypassing of settling tanks was observed	TX 4877 at -1058
1964	Apr. 27	Wastewater	Monarch clarifier shut down for 24 hours	TX 4877 at -1061; TX 12017 at -969
1967	Feb. 6	Wastewater	Monarch clarifier drained because bull gear on clarifier thickening mechanism broke	TX 4877 at -1062
1969	Nov. 28	Sludge	Monarch Clarifier bottom jammed up	TX 11983 at -310
1978	May 10	Yellow-colored water	“Upsets from Monarch clarifier caused by air being pumped into clarifier during the production of Gold Cork Tipping Paper”.	TX 4877 at -1065
1979	Mar. – Apr.	Oil/grease discharge	Oil/grease discharge on multiple occasions	TX 4892 at -781
1981	July 20	Wastewater	Bypass due to clarifier repairs.	TX 4877 at -1066
1982	Apr. 15	White-colored water	Temporary surge in flow of clarifier effluent to Portage caused by replacement of pump at Monarch clarifier.	TX 4877 at -1066

Addendum L**KVP Mill Bypass History**

Year	Date(s)	Material	Description	Reference
1975	Sept. 15	Wastewater	“[A] period of poor performance, particularly in the week of September 15. We believe this was coincidentally associated with a cleaning program in the wastewater lagoons.”	TX 7501 at -680
1978–1984	Jan. 1	Wastewater	60 total BOD exceedances during this time frame	TX 7499 at -804

Otsego-Menasha Mill Bypass History

Year	Date(s)	Material	Description	Reference
1975	May 13 – 14	Wastewater	Portion of the process wastewater discharged to Outfall 003 was not going through the clarifier.	TX 7601 at -886
1976	Aug. 14 – 30	Wastewater	Sludge consistency in the secondary clarifier dropped and suspended solids in the effluent dramatically increased	TX 7602 at -896
1977	Jan. 7	White water	Unknown quantity of untreated white water entered the River.	TX 7602 at -036